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Camera Craft

A Photographic Monthly

Volume XVII

January to December, 1910, Inclusive

Published by

Fayette J. Clute

413-415 Call Building
San Francisco, - Cal.

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EDITED BY FAYETTE J. CLUTE

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A Photographic Digest

EDITED BY H. D'ARCY POWER, M. D.

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Camera Craft

San Francisco, California

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Camera Craft

A PHOTOGRAPHIC MONTHLY

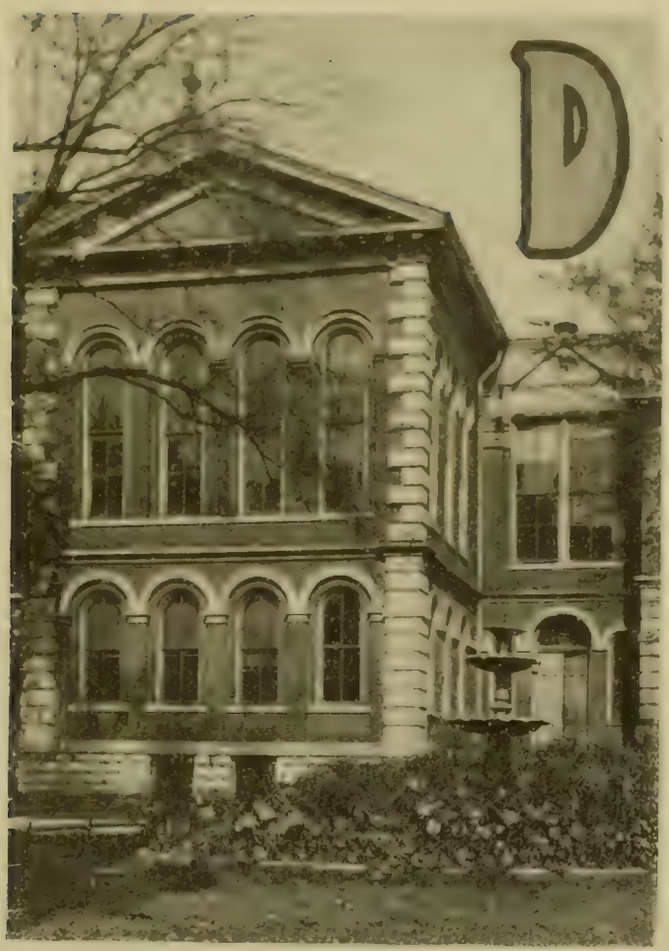
FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, JANUARY, 1910. No. 1

Control in Development

By Lawrence Heyd Smith

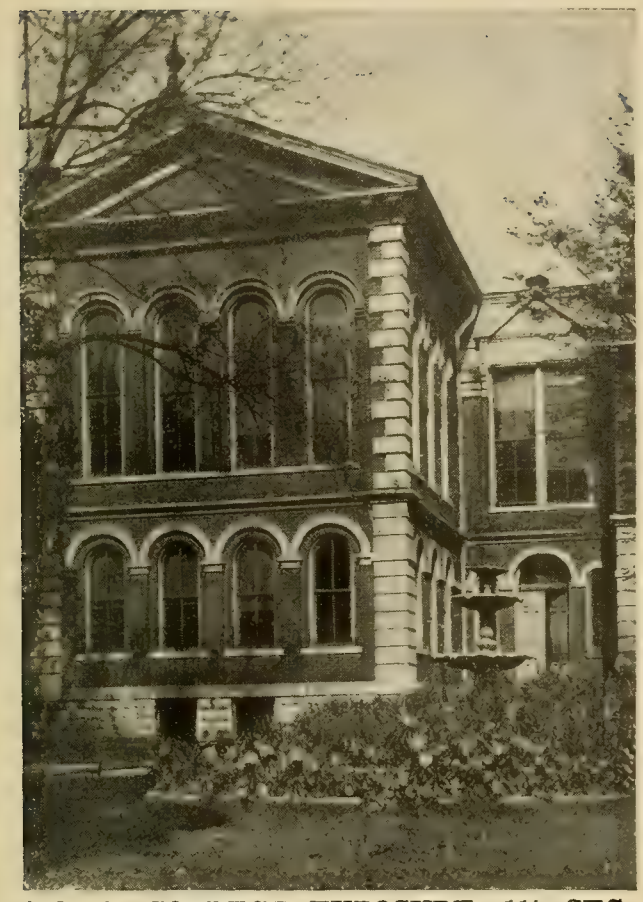


NO. 3; OVER EXPOSURE, 10 SECONDS

DEVELOPMENT, as a photographic subject, is a well-worn theme. No phase of photography has been more discussed, nor from so many different viewpoint; but, notwithstanding, I am sure that all will agree that there is more to be learned than has as yet been even hinted at. The real end of all photography is the print, and to have a perfect print the negative must be of the best quality obtainable, no matter under what conditions it was exposed. It must be crisp, snappy, and with good detail. To secure these essential qualities in negatives, the exposures of which are bound to vary according to conditions over which we have no control the development and developing agent should be very carefully considered.

Among professional photographers, pyro undoubtedly stands first. Portrait artists, exposing plates day after day under practically the same conditions, do not experience the difficulties that beset the outdoor worker in this respect. Their exposures being uniform, there is not nearly so much need of control as the others find necessary; therefore pyro fills their need. To my mind, a combination of metol and hydrokinone is far superior when control is required.

In the latter combination we have two developing agents or reducers. The first, metol, when used with sulphite and an alkali alone, makes a very active developer, producing the maximum amount of softness and detail that



NO. 1; CORRECT EXPOSURE, 1½ SEC.

NO. 2; OVER EXPOSURE, 4 SECONDS

it is possible to secure. The entire image starts developing at about the same time and full detail is visible in from one to one and a half minutes. After this point is reached, density is added very slowly. Hydrokinone on the other hand, works much more slowly than metol and tends to increase the contrast, for which reason it is undesirable for under-exposures. It works very clear, with no danger of fog.

It should now be seen why I select metol-hydro in place of pyro when control is necessary. In the first we have two reducers of almost opposite characteristics, the proportions of which can be modified at will, while with pyro all control must be accomplished by varying the strength of the solution. Metol and hydrokinone in combination give us the advantages of each, and the good qualities in one counterbalance the bad in the other.

The foregoing may seem rather elementary to most of my readers; but, as they follow the experiments described, they will see the reason for its insertion.

Wishing to make a practical test of the possibilities of controlling the development of negatives over and under exposed, within reasonable limits, I exposed five plates under the following conditions.

No. 1: Correctly exposed ..... 1½ seconds.
No. 2: Overexposed ..... 4 seconds.
No. 3: More overexposed.....10 seconds.
No. 4: Underexposed .....1/5 second.
No. 5: More underexposed.....1/25 second.

In making these exposures, I used a 5x7 view camera equipped with a Planatograph lens, using stop U. S. 32. The plates were Stanley regular. To complete the data: October; about 10 a. m.; sun shining through a haze.

Not wishing to trust to my own judgment for the correct exposure in a test like this, I used Watkin's bee meter to time plate No. 1.

Plate No. 1 was developed in the regular M-H formula until the image was clearly visible on the back. No. 2 was started in the same developer; but, as soon as signs of overexposure began to show, it was transferred to a developer made from the same formula, except that metol was omitted. No. 3 was developed entirely in the plain hydrokinone bath. As full detail had been insured by overexposure in No. 2 and No. 3, it was only necessary to develop for contrast, which would have undoubtedly been lost if the regular formula had been used. In developing No. 3, the ten-second exposure, the amount of alkali was decreased somewhat. No. 4 was started in the metol-hydro developer. The high lights appeared strongly before detail in the shadows was visible. It was immediately transferred to a developer without hydrokinone. Detail at once began to appear; and, when development began to lag, the plate was again placed in the normal bath to gain what density it could. No. 5 was first placed in the metol developer and allowed to remain until all detail was visible, even in the densest shadows. At this point it was placed in the regular developer to gain density, which it did very rapidly, only about one minute being necessary to make the image visible on the back of the plate.

I will not inflict my formula upon you; for, if you use metol-hydrokinone, you most likely have a pet formula of your own; and, if you haven't, any good one will do. The one advised by the maker of the plate you are using will be the best. For your normal developer, mix according to the formula. The two control developers are exactly the same, with the exception

NO. 4; UNDER EXPOSURE, 1/5 SECOND

NO. 5; UNDER EXPOSURE, 1/25 SECOND

that in one the metol is omitted and in the other the hydrokinone. In using them, remember that metol is for the plates that are underexposed and hydrokinone for those overexposed.

Now for the resulting negatives. As you cannot see them for yourself, I will describe just what I saw in them. No. 1 was of good density and gradations, as is usual when a plate has been correctly exposed and developed accordingly. No. 2 was not quite so dense as No. 1, but, with this exception, was identical with it. No. 3 was very slightly thinner than No. 1 and a trifle denser than No. 2, suggesting the advantage of decreasing the alkali. The gradations of all three were the same. Of No. 2 and No. 3, the latter seemed to represent the subject a little more truthfully than No. 2, taking No. 1 as the standard of comparison. This seemed to show that overexposed negatives will produce better results if developed in hydrokinone alone than if started in a regular developer and then transferred to the contrast developer. No. 4 was much thinner than either No. 1, No. 2, or No. 3, but the gradation of contrast was identical with No. 1 when the relative density of the two negatives was considered. Full detail was shown, even in the densest shadows, as well as half-tones in the highest lights. No. 5 was denser to an appreciable extent than No. 4, with the detail more in evidence. Comparison with No. 1, the standard, showed the same relative degree of contrast. Comparison with No. 4 indicated that known underexposures should be started in a metol developer without hydrokinone and transferred to the normal bath only when all detail is out and the process of adding density beginning.

Prints were made from each negative on the same grade of paper, and it is an utter impossibility to tell which were under and which over exposed. The illustrations of this article are the prints in question.

Careful comparison between prints and plates indicates but one difference, that of density. In the standard, No. 1, and overexposed, No. 2 and No. 3, plates the opacity is greater than in the underexposed plates No. 4 and No. 5. In all five plates, the relative contrast between the high lights and shadows is the same. In other words, they are of equal printing value, only requiring a varying exposure to the printing light. This goes to prove that, with reasonable underexposure, full detail can be obtained, and with overexposure, proper contrast, if careful and correct development, with a reducer selected with reference to its detail or contrast producing qualities, is given, the contrast in the one and detail in the other being supplied by the exposure given. I did not go to extremes in either case; but, as for underexposure, I quote from No. 66 of the "Photo-Miniature": "It is doubtful if any man can set a limit at which a slight exposure can be developed."

In conclusion, let me say that this method is not as difficult as it may seem. I only mix a small quantity of the control developers at a time and keep the two small bottles within easy reach while I am developing, using one or the other as the case may require. Don't take my word for the results. Make a series of similar exposures yourself; then apply my method to the negatives. The practical knowledge, gained by experience, will more than repay you for your time and the small cost of the necessary materials.

Some Work in Between

By Rich A. Towers

The Second Prize Article Winning a Wold Air Brush.

Illustrations by Steckel Studio, Los Angeles.

There is probably no technical knowledge so essential to the professional photographic printer, who aims to fully satisfy the requirements of modern taste in portraiture, as a clear and definite understanding of the semi-mechanical methods available for the betterment of the finished product. Well-balanced and atmospheric vignettes, softly tinted and harmonious borders, tasteful and artistic backgrounds, all these and more are better and more easily produced by the employment of a little skill and labor at the hands of the printer after the negatives come to his hands from the drying rack. The operator, be he ever so skillful and experienced, has enough to do in securing proper pose and expression, suitable lighting, and correct timing and development.

We have been told, and some of us believe, that a vignette is lacking in artistic quality. As produced by some of the photographers during the past decade, they were often far from satisfying to the cultivated eye. On the other hand, all the celebrated miniature painters and most of the famous etchers employed the vignette for practically all their portrait work. The object of the vignette is to suggest a combination of solidity, balance, and atmosphere. It also concentrates the interest upon the real picture, the face of the sitter. A good vignette does all this, and a poor one offends only in proportion to its failure in this direction. A dainty figure, well placed and properly balanced by its vignette and border, is not only pleasing, but it is creditable to its producer from an artistic point of view. The subject has been made to cast its shadow, as it were, on a tangible substance; the detail of light and shade, and the intimation and grace of the pose have been accentuated or softened by the manner in which the shading has been distributed. The delicacy obtained by the subduing effect of the vignette as a whole tends to produce atmosphere, roundness, and to overcome the cut-out appearance so characteristic of the average photographic portrait.

There are two requisites: first, an air brush, and second, a distinct understanding that the outline of the figure in all its contours is not to be followed. With the air brush you will find it possible to work directly upon the back of the negative with any degree of softness desired, thus overcoming entirely the halo and church window effects so readily obtained in the old method of vignetting on the tissue covering of the printing frame. The tendency to follow the outline of the figure is to blame for much of the poor vignetting of the past. As to the actual operations, I first prepare my negatives by covering the glass side with a coating of ground-glass substitute.

There are many formulas for this, but, unless a large quantity is required, it is better to buy a small bottle of the prepared article, such as Hance's. This has a fine grain, and sufficient for a great number of negatives is contained in a six-ounce bottle. Flowing the negatives is easy if one will but practice on the back of a few wasters. Holding the negative in the left hand, a pool is poured on the corner opposite the thumb, just about enough to cover the surface, and then, by inclining the surface, the varnish is flowed from that corner towards the thumb, from there to the nearest corner uncovered, and off at the opposite one. This dries almost immediately. The negative is then placed in a retouching desk or other suitable holder, ground-glass side up, and the work of vignetting commenced. I prefer a red or sepia ink for the air brush, as it is transparent enough to allow the image on the negative to be seen; while it is, at the same time, practically non-actinic in printing. In most cases the vignetting is completed on this surface.

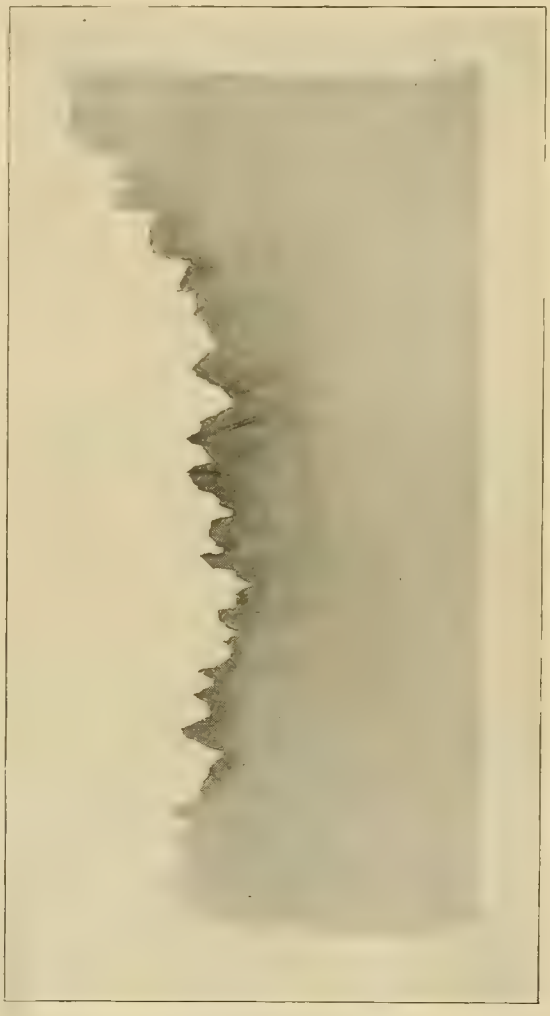
Vignette the head first, as that requires the most care. Begin by following the outline of the hat or hair in good solid color, putting it on quite close to the outline. If it is a profile, start at the back of the neck and carry the ink over the top of the head to the forehead; or, if a front face, start the vignetting from a point close in to the ear on the shadow side and over to a corresponding point on the light side, taking care to produce a much softer or more blended effect in the treatment of a full face view than is necessary with a profile. Finish from the ear or the forehead, as the case may be, to the shoulder, by starting with the solid color near the outer edge of the negative, drawing nearer figure in increasing softness, ceasing when you have produced a delicately clouded, broken line between these points. The illustrations herewith will explain my meaning better than words. The rest of the figure should be treated in a like manner, working from the edge inward and closing up the vignette, as we might term it, at any prominent horizontal line and broadening or opening it between such point and the next promi-

nent feature. Bear in mind the fact that the vertical lines are the main essentials around which the shading is to be worked, while the horizontal lines should be considered merely as balancing points to be seldom accentuated. Be generous in shading the base of the figure; and, to assist, by contrast, the detail in the high lights, let the vignette as a whole be a little broader on that side.

Occasionally the figure may appear too small, may seem lost, on the size of paper it is desired to use. The examples herewith show appropriate treatment in such cases, and such border effects are not inappropriate as a regular production when something different is desirable. I will describe the making of a simple band border, the production of endless variations that will suggest themselves to the worker being equally simple. Take a stock oval or form and cut a suitable mask or matt, place this over the print, trim an eighth or quarter of an inch off the cut-out part and place it in position in the center of the mask, holding it in position with a small weight like a coin or two, and spray the selected color over the exposed portion of the print between the cut-out and the mask. Frequently it will produce a more pleasing effect if the line of color be carried only partially around the figure, particularly if the lower portion of the vignette contains the necessary solidity of effect.

Before leaving this subject, I must mention a method of producing a wash-drawing effect by means of the air brush, particularly well adapted to the use of those who are not skillful enough to effect it with the ordinary paint brush. First prepare the print by giving the negative a very close vignette as described above. Then take the print and from a piece of oiled tissue—onion skin is the trade name—cut a mask to follow the outline of the

figure. This is easily done by laying a piece on the print, tracing around the edge with a pencil, and cutting it out. Carefully lay this in position and apply a small weight. Then tear the edge of another small piece of the tissue into an irregular scalloped outline, lay this in position near the figure, and spray the intervening space with the selected color. Move the scalloped piece further away from the figure and spray again, continuing the operation, moving further away each time and taking care not to obliterate the succeeding layer of color and the formation produced. By moving the scalloped edge of the tissue up or down, the outline will be varied. With a little care, exact replica of a wash-drawing effect will be obtained. Examples of this sort of work are shown herewith. With a very little practice, a dozen prints may be given this additional finishing touch in a few minutes. Incidentally, it is customary to lay this work on obliquely to the position of the subject, and, when this outer manipulation is finished to the worker's satisfaction, the protecting mask is removed and a finer spray of the same color applied to the drapery to complete and harmonize the whole effect. If developing papers are being used, a tuft of cotton soaked in wood alcohol should be rubbed over the surface of the prints, previous to spraying on the color, as so doing will



prevent any tendency of the color to run in streaks. However, except when one is working very fast and putting the color on quite strong, the danger is hardly worth considering.

It was not so long ago that microscopic delineation of detail in drapery and brilliant high lights were the last word in photographic technique; more recently, a few refractory members of the profession have maintained the desirability of an indefinite focus. Personally, I believe the up-to-date photographer of today endeavors to strike between these two extremes and produce soft, monotone effects. He tries to arrange the lighting of his subjects by means of screens and reflectors so as to subdue the strong illumination and concentrate the interest of the observer more particularly upon the subject rather than upon the accessories. To assist and emphasize this effect, in addition to what can be done in making the negative, we can have recourse to tinted and blended borders, carrying the effect still further by the employment of harmoniously toned mounts and enclosures. With the air brush at one's command, there is apparently no limit to the number of designs that can be produced, their agreeableness depending entirely upon the worker's taste in selection. I will describe the method of producing the border shown herewith, and the reader can easily see how greatly the air brush has simplified the old method of double printing to obtain a similar result. The illustration, however, does not show the wide white outer margin often allowed to surround the print.

Having determined upon a margin or border, say one inch in width, cut a mat or mask out of thin paper, with an opening that much larger than the printed picture, and place it in position surrounding the figure. Then cut a protecting mask of the desired size, place it over the photograph and tint the exposed portion between the inner edge of the first mask and the outer edge of the other, with the selected tint. If this border is of the same tone as the print, it will increase the apparent size of the picture; if it is darker, it accentuates by its strong contrast and brings out the detail; if lighter, its tendency is to

increase the apparent depth and richness of the print. In aiming at any definite result, these points should be taken into consideration. The making of double or blended borders is simply an elaboration of the above method. Having completed this first simple border, place a mat with a larger opening around the first tint and repeat the operation of spraying or tinting the newly exposed surface, not forgetting to leave the protecting mask over the picture itself until the operation is completed. And, in tinting each successive border, this protecting mask enables one to blend the tints without fear of encroaching upon the space devoted to the picture. I rarely find it desirable to use over three borders, and I increase or diminish their width as seems best. A few tests will determine the most satisfactory variation. As a finishing touch I add a small monogram by using as a stencil the desired lettering carefully cut from thin paper, placing it in one corner and using the same tint of color so that it blends harmoniously with the general effect.

This method of assisting the high lights suggests that one occasionally has a portrait in which a slight softening of the whole picture would be an advantage. While applicable to a wide range of work, the following plan produces most charming effects with this class of prints: The portrait is printed as a vignette on a large sheet of paper; then an oval mask is used to protect the margin and the paper is just slightly mellowed by spraying on a suitable color, such as yellow ochre, tan color, or a light brown. If the prints are then made plate sunk, with a slightly larger oval and an embossing tool, the effect is very good. In spraying on the color, it is better to go over it a time or two, letting it dry between and judging the color as you go along, rather than try to hurry the work and find you have sprayed on too strong a color at the first attempt. This tinted effect is shown in the frontispiece this month, the plate-sunk effect not being reproducable.

In a preceding paragraph I hinted at the tendency of modern photographers to produce soft, pleasing effects in monotone. To the printer, the preparation and printing of special backgrounds should prove the most inter-

ORIGINAL PRINT

BACKGROUND

FINISHED PRINT

esting and satisfactory part of this work. Particularly is this the case when so doing allows the offering of an individual effect for each subject. Presuming

that the negative has been made with this object in view, the subject will have been posed before a black background so that the figure is surrounded by a transparent ground. It then becomes easy to produce Gainsborough, Rembrandt, and other effects, far superior to any possible arrangement of studio accessories. The illustrations herewith are sufficient as proof of this statement, I think. Their production is simplicity itself, although requiring a little more artistic skill than the making of the border designs. One needs for the work a few sheets of ground glass the same size as the negatives to be printed. The design selected should harmonize with the subject. The air brush should be charged with sepia ink. Place the negative face down in a printing frame and on it place a sheet of ground glass, ground side up. If the frame is a little wider than the two glasses, fasten negative and ground glass together with strips of lantern-slide binding at top and bottom. This will make it easy to secure perfect register between the negative and the plate carrying the ground, when their position is reversed for printing. Support the frame so that you can apply the color working by transmitted light coming up through the negative. Do not attempt to produce a mass of detail; only a few strokes for the high lights. Study some of the reproductions of such pictures as they appear in the popular magazines. Imagine them in the negative form and you will realize how simple they are in that shape. It is an excellent plan to make a collection of such pictures, particularly at the beginning. You will find them in magazines and other publications, in endless variety. Trees, arches, curtains, in fact every imaginable combination. Do not follow them slavishly, but learn to adapt them to your figures, using only such portions as seem best suited. When you think you have your ground-glass sketch completed, put both the designed ground and the negative in a printing frame in the ordinary way and make a trial proof. A very little practice will give one confidence and skill, and the ease with which the most pleasing results can be obtained will become a sore temptation to one to produce all his work with such backgrounds.

It is obvious that where one has a large number of prints to make from one negative and has used the air brush the little time that is necessary to insure confidence, the production of the border effects, wash-drawing effects, and the like, can be achieved by working directly upon the negative, only shading in the opposite way. And, of course, the negatives should be made with a light gray ground and be reduced with some clear working reducer all around the edges with a vignetting effect toward the figure in the center. This article is already too long, and I will leave that part for some future effort.

Hold It

The expression is fine. Hold it. The mood is splendid. Hold it. Life is just one little mood after another. Why not a keen, kind one? And then—hold it.—J. C. Strauss, in "Strauss—His Book."

To Title One's Negatives

By A. C. Ames

The average worker would prefer to title his negatives so that the lettering could be removed, if desirable, at any later time. If the title is placed on the emulsion side, this is almost impossible, besides the disadvantage of having to do the lettering backwards. In addition, lettering upon an absorbent film of gelatine is not so easy as it would be upon a hard

THE TITLE PERFECTLY LEGIBLE, YET NOT OBTRUSIVE

surface. The picture reproduced herewith is one of hundreds that I have titled by lettering directly upon the glass side. The slightly soft edges that the letters have, due to the slight diffusion of light between the upper surface of the glass and the paper, is an improvement rather than otherwise. It makes the title less glaring and obtrusive. As trying to use ordinary ink on the glass would result in its spreading all over, I hit upon the following method. I take a good black ink and mix it with common liquid glue, equal quantity of each. The mixture flows well from a common steel pen, and the glue holds it in place. It dries very quickly, becomes hard and firm, yet is easily removed at any time. By placing a white sheet of paper under the thin portion of the negative where the title is to be placed, the work is easy and direct, there being no need to study the formation of letters as when the work is done backward on the film side.

I have purposely sent a card with the lettering done very hastily and on a rather light ground. More care and a darker ground is of course productive of much better results.

Photographing Wild Birds

By William L. Finley

Author of "American Birds"

CASPIAN TERN AND YOUNG. Taken from a Blind at Breeding Grounds on Lower Klamath Lake. Copyrighted, 1906, by H. T. Bohlman.

Illustrations by H. T. Bohlman and the Author

THE obtaining of a good wild bird photograph is the result of long study and patient waiting. It is difficult enough to get a photograph that is artistic in effect if the subject be a stream or path through the woods, or a section of landscape where one can study it from every point of view, or if the subject is a person who wants to be photographed. It is very different, however, with a wild bird subject that is constantly moving or hiding and keeping as far from you as possible. One generally has to take what he can get; yet this is not always so. One may obtain bird photographs of artistic value by combining a technical knowledge of the camera with a close study of nature. He may sometimes select his position and his subjects, providing he has the patience to wait hours, and maybe days.

It takes patience to catch good bird photographs. Patience is the salt of the old bird-catching legend. Often a whole day slips by without getting a single good picture; but, if one has his eyes open, he cannot fail to

WESTERN GREBE CHICKS SWIMMING

THE GULL OUTLOOK.—ON THE BOWSPRIT

pick up some interesting bits of information.

The chief source of satisfaction in a camera study of bird life comes, not in the odd-time chances of observation, but in a continued period of leisure when one may spend his entire time about bird homes, just as he takes a vacation at the seashore. One cannot take a camera, no matter how expensive it is, and snap off good bird pictures during the spare moments of a busy day. To be sure, the joy of nature comes to the amateur, not to the professional; but, to be a successful amateur bird photographer, one has fairly to make a business of lying in wait for his subjects hour after hour, day by day, and maybe, week after week. The reward of success comes, not in mere acquaintanceship with some bird, but in real friendship. There cannot be the formality of a society call, but one should, by frequent visits, be well enough acquainted to drop in at any time with his camera without interfering in the daily affairs of family life.

Occasionally I like to go back to the more primitive way by taking to the trail for two or three weeks to hunt and fish for a living. It sharpens the senses to live as the Indian lived. I have waded mountain streams and whipped the riffles for trout; I have hunted the woods for a dinner of grouse and quail. There is not a moment of more intense excitement that comes to the fisherman or hunter than comes to the photographer as he lies hidden in the bushes, camera focused and bulb in hand, waiting for some sly creature to come into position. If it takes a fine shot to clip the wing of a flying quail, or to catch a buck on the jump, it takes a skilled hand to anticipate bird movements that are too rapid for the eye and click the shutter at the exact instant.

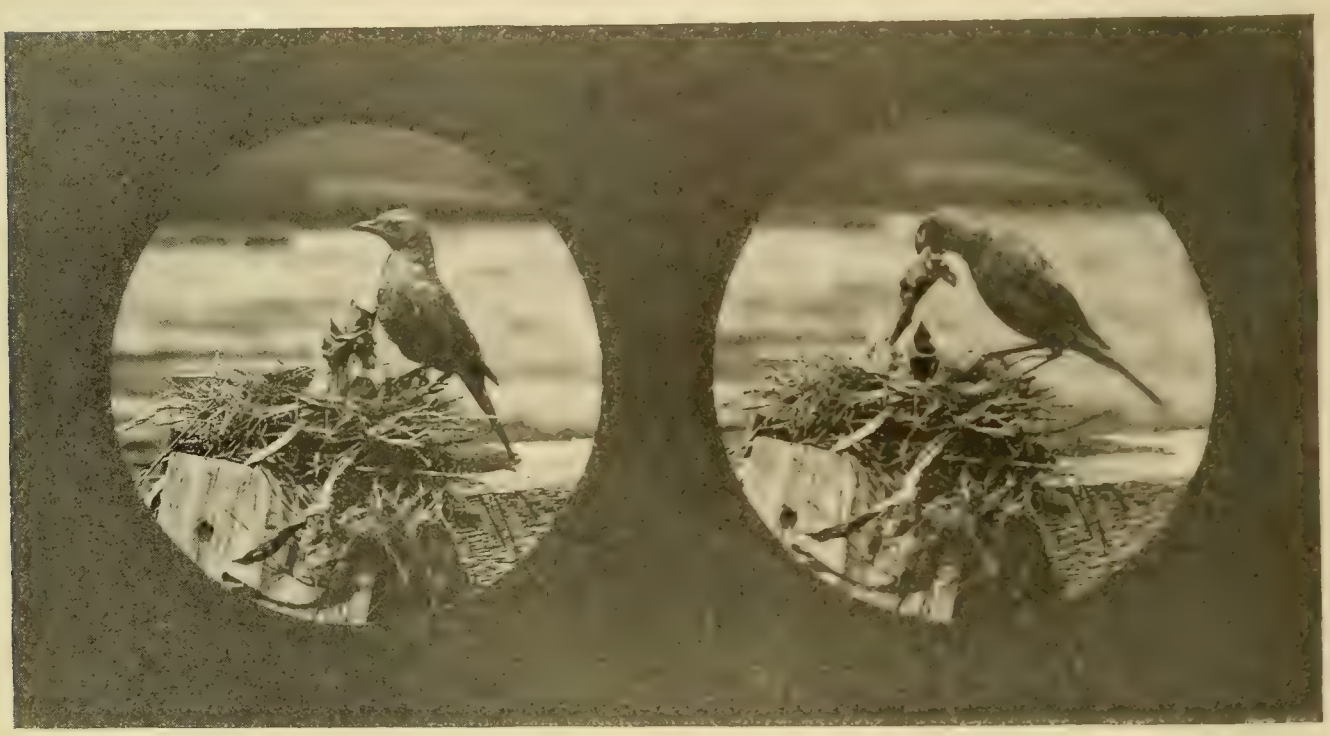
Some people think the most artistic things in photography are accidental. Of course, there are some accidental snaps that result in good nature photographs. Generally, the art in wild life photography comes from

GREAT BLUE HERON BESIDE NEST IN TOP OF SYCAMORE TREE

FINLEY AND BOHLMAN EXPLORING LOWER KLAMATH LAKE, NOW A GOVERNMENT RESERVE FOR THE PROTECTION OF WILD BIRDS

a selection of subjects and careful, patient study. It is not a subject half out of focus, nor a plate that is fogged.

How much the skilled painter has it over the photographer! The painter may place his heron on one side of the river or the other, plant his trees just where they produce the best effect. He may make the water ripple or reflect, flow east or flow west. When the enthusiast with the camera tries for these effects, he has to search a good while for his foreground and background. He has to move to suit the light, not move the light to suit himself. Even if he selects a good position, his bird subjects are likely to be missing. It is rare indeed that one gets a combination that is artistic in make-up.



MOTHER, WE'RE HUNGRY

HERE'S YOUR SUPPER
By C. E. RAU

Courteous Treatment Pays

"I can get photographs for just half what you ask me, and only one block down the street." She was very earnest in her affirmation, and we could only say: "It's surely your privilege to pay more or less as you choose; but our friend down the street, though a good fellow, does not pay our bills, and we cannot furnish you this grade of work for less than the price named."

"You certainly are courteous to your photographic friends, and your work speaks for itself; I'll try a sitting."

The foregoing was the introduction of a very large family to our photographic ministrations, and has kept them for more than thirty years. The moral: Always do your level best, be it in making a negative or in speaking of the other fellow—"a block down the street"; and you will always rejoice, as did—"OLD FORTY."

A Few Don'ts

By George S. Smallwood

Illustrations by the Author

WAITING FOR THE LETTER CARRIER

THIS is perhaps a queer title for an article that is intended to help the amateur to master the many little difficulties that stand in the way of his making his work a credit to himself as well as a pleasure to both himself and his friends. But it is the avoidance of some things, as well as the doing of others, that constitutes the production of good work in every line of endeavor. If I had my photographic career to go over again, I would leave out a great many foolish things that we all do in the ignorance of our primary days. Members of the human family are born without even the instincts that the young animal has as a matter of course. The child must be taught, and, if a trade or profession be essayed, that also must be laboriously acquired in all its details. One must begin at the bottom of the ladder and gradually work upward, and, as the ascent is made, the warning "don't" greets us at every round. And here are a few of the "don'ts" that I encountered:

Don't expose plates recklessly in the hope of getting one good picture. Study the subject and learn to see it as a finished picture without the waste of a plate and the work of producing a print in order to see how it will come out. If you cannot find a suitable viewpoint, one where the picture composes well, pass it by. There are plenty of other views that will compose well, if you will only search them out. Don't guess at the proper exposure. There are any number of good exposure tables and exposure meters on the market, and prices ranging from a few cents to a few dollars. Do not make snap-shots unless there is a moving object in the view and a quick exposure is necessary. A time exposure will always give a better negative when

properly developed. Don't be continually trying some new developer. They are all practically alike, except to the expert who thoroughly understands some particular one with which the action of a new developer can be compared. There is no particular virtue in some particular developer or formula. Not long ago I was favored with the formula used by one of the finest photographers in the land. And what was it? It was the exact formula published with the first box of Seed plates that I ever bought, and that was many years ago. I had early discarded this formula for a new one, which was in turn discarded for a still better one, and so on through a long list, in my search for a perfect developer. A "perfect" developer for me at that time, I can now see, would have been a wonder. It would have been a corrective of wrong exposure, a remover of fog due to careless handling of my plates, and it would have been a fixing and washing compound as well as a developer. In fact, it should have had the power of preventing scratches and finger marks on the film. Use any good developer and stick to it until you understand it thoroughly. Don't develop in a flat dish when you can get better results in a tank. Don't overwork your developer by trying to use it over and over again. Developer is cheaper than plates, and good negatives are worth more than poor ones. Don't try to use the fixing bath after it becomes dirty and exhausted. Hypo is expensive only when it is old and fails to do its work. An acid fixing bath is better than one of plain hypo, but it must be mixed rightly. The chemicals must be dissolved in the order given in the directions that come with your plates and paper. Wrongly mixed, they "fall apart," as the saying is. Don't fail to wash both plates and paper for a full hour in running water. Don't place your rack of plates in a window to dry, as they will catch too much dust. Don't depend upon retouching or doctoring to correct the faults of a bad lighting, wrong exposure, or unwise selection of viewpoint. Use more care in making the negative. It is well enough to practice and gain a little proficiency in this sort of faking; one may have to use the knowledge when there is no other way of securing a certain result; but it is much more satisfactory to get the desired result in the negative. It is much more profitable to make nice, clean negatives, making quality, not quantity, your watchword. Don't try to make pictures for all your friends and relations without exacting a return. They will value your work more if you put a valuation upon it; besides, you will need a long purse to pay for all the photographic stock that will be required. If you are exacting payment for your work, you will have a constant incentive to make it worth the price charged. Such of your work as is put into circulation will be better than it otherwise would. In this way you will the better build a reputation for work that is better, and the work will be constantly improving. When you buy your first anastigmat lens, don't rush off and try to photograph a train moving at a high rate of speed. Take it standing still; the result will be as effective and better as a photograph. An automobile moving fast enough to raise a little dust is a somewhat better subject. The position of the feet will indicate motion in a person or animal that is walking or running. A football or baseball team in action is a good

subject for high-speed photography. Remember that you must secure something beside the object itself in order to show that motion is taking place.

Don't be in too big a hurry to get at your developing. See that all the trays are clean, the developer fresh and of the right temperature, and don't neglect to rinse your negatives between the developer and the fixing bath. If you wish to use your developer the second time, do not let it stand in the tray or tank, but put it in a bottle and cork it up. Wash the negatives at least one hour. When washing your prints, do not allow the water to run with great force. I put a sponge in my tray and allow the water from the tap to fall upon it. Don't wash prints over an hour in slowly running water. It does no good and the soft gelatine of the coating simply picks up all the dirt in the water that passes over. Don't let them fix in a fresh,

THE FRONT STEPS IN THE GARDEN

full-strength bath over twenty minutes. Remember it is the chloride that gives the developing papers their particularly good quality, and chloride of silver will not stand a strong fixing bath; they are inclined to reduce somewhat if left in too long.

Don't print your developing paper too near an open window. Hang a sheet of unbleached muslin over the window and then expose the printing frames from four to ten feet back in the room, thin negatives further back. Don't guess at the time. Hang up your watch and give each one the right time. From fifteen to thirty-five seconds' exposure gives the best results with strong negatives. Soft negatives require a still weaker light.

A MICHIGAN AVENUE VIEW

And of all these don'ts, this don't is a don't you don't want to forget: When you get so that you can make a fairly good picture, don't allow your think tank to swell up so tight that there is no chance of advice getting in. Take all the advice you can get. And don't criticize the work of others and tell them how it should be done before you are competent to give a practical demonstration. I have assisted a number of amateurs and tried to put them on the right road, and often found that they shortly knew it all and no longer appreciated my efforts in their behalf. I have been working at photography for a good many years, yet I derive much benefit from reading "Camera Craft" and other good photographic magazines. One never becomes too old in any line of business to learn.

Accompanying this article are a few reproductions of pictures I made last summer. I think they will bear me out in my plea for good technical work, as put forth in my article in the September issue of this magazine. There is nothing remarkable about the work; it is such as any painstaking photographer can make. Outdoor lighting requires a little study, and one will do well not to waste plates on portraits when the shadows are not long enough to protect both the sitter and the camera from the direct rays of the sun. In summer time, when the light is strong, it is best to make exposures just before sunset when the front of the house faces east. The best pictures I have made were taken on the east side of the street with the camera facing east, just as the sun was bidding mother earth good night; the long shadows from the houses then surrounding the subject. The young lady shown in the initial at the head of this article was photographed under

these conditions. All of these exposures were developed by the tank method. The young lady on the stone bannister was originally seated with the sun shining on one side of her face. I explained that she would have to wait about an hour, at which time I would return and make the negative. Coming back at the time indicated, I found the sun just low enough to make the lighting soft and diffused, and a good likeness resulted. The lady in the garden was photographed just a few minutes previous, in the rear of the same house. She was facing north, and a time exposure gave me a good result. The garden fence shaded the figure, with the exception of the feet, a little too much for good detail.

"Camera Craft" readers who have not been in Chicago will perhaps be interested in the next picture. It shows Michigan Avenue opposite Grant Park, formerly the lake front. This is only one of many that I have made, all showing how these tall buildings can be photographed without an appearance of being out of plumb. The nearest building is the unfinished new Blackstone Hotel, twenty stories high, and to be one of the most beautiful buildings in the United States. The next is the Conservatory of Music, Congress Hotel Auditorium Annex, Auditorium Hotel, Studebaker Theater, Chicago Club, Railway Exchange, this last eighteen stories high, white porcelain faced. The building standing all alone, the only one in Grant Park, is the Chicago Art Museum. The picture also shows the unfinished sixteen-story building of the gas company, and Montgomery Ward & Co.'s building with the great sixteen-foot brass weather vane on top. The Public Library is in the far distance. I could have secured better depth of focus by stopping

THE SUPERINTENDENT AT HIS DESK

BOATING IN DOUGLAS PARK

down, but movement made it impossible to give a long exposure. The exposure was one twenty-fifth of a second with f-8 stop. In another article I will show these buildings taken separately, this being a street view.

The two boating scenes were made in Douglas Park. Wind and the tossing of the boats made the same short exposure necessary. The picture showing the superintendent examining samples of cloth was made with the subject about ten feet in front of the light and the camera directly under and a little to one side of the light. This light came from the principal window in the room. The curtain on it, as well as the others in the room, were all drawn up from the bottom so as to get as much top light as possible. The lighting is a little flat, but gives an excellent portrayal of the subject.

I have received so many letters from photographers and others, thanking me for my article in the September issue, these letters coming through "Camera Craft," that I have asked the editor to place my address as well as my name at the close of this one. I would be pleased to hear from readers who are interested in the advancement of photography along the lines of better technique.

GEORGE S. SMALLWOOD,
3269 Archer Ave., Chicago, Ill.

The Value of Work

The more people do, the more they can do. He that does nothing renders himself incapable of doing anything. While we are executing one work, we are preparing ourselves to do another.—Hazlitt.

Enlarging at Night

By F. C. Wilbour

During the long evenings last spring, the writer wished to make some enlargements, but did not feel like expending enough money to buy any of the outfits on the market, so rigged up one himself that gives very satisfactory results, and believes that many amateurs would employ their long evenings to good advantage if they knew how easy it is to make the apparatus necessary.

Fig. 1.

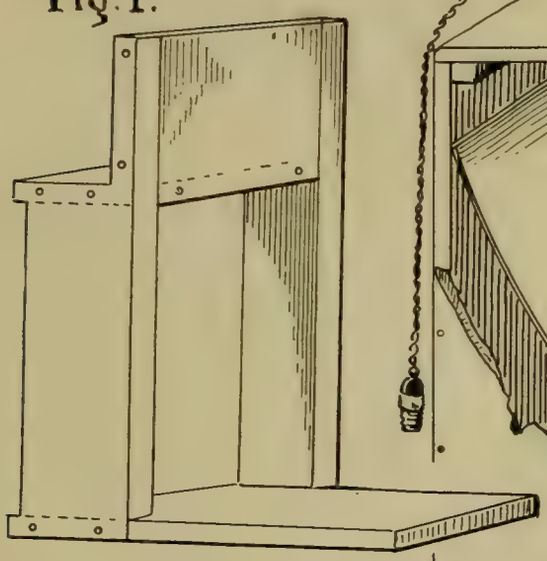
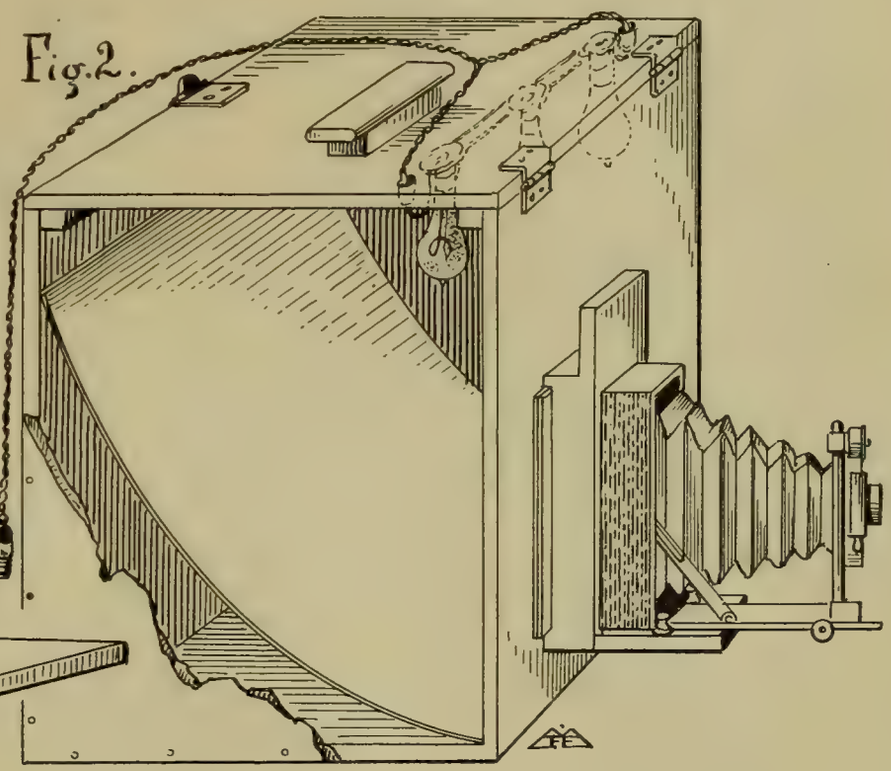


Fig. 2.



Secure a box about fifteen inches wide by twenty inches long and thirteen inches deep. For convenience in description we will stand this on end and call the part from which we have removed the cover boards the front. Fasten three or four electric light sockets inside of the top, and just far enough from the front for the lights to clear the front cover about an inch, and the end ones far enough from the side of the box so that the end lights will clear the sides about that distance. Have an electrician connect these sockets up with wires running through porcelain tubes in the top of the box and have these wires connected with an extension cord and plug so that you may use the apparatus anywhere that you choose. You may then stuff the space between the wires and the inside of the tubes with any suitable material at hand to keep the light from coming out into the room. Next paste black paper over any cracks that might let out light, and line the box throughout with white paper. Secure a sheet of pure white blotting paper and cut out a piece long enough to reach in a curve from within two inches of the top of the inside of the back of the box to the front of the bottom.

This is the reflector, and should be wide enough to fit snugly into the box at both sides. It now remains only to cut an opening in the front or cover of the box to fit the back of the camera, when you can proceed to enlarge as described in the booklet issued by the Eastman Kodak Company, "Bromide Enlarging With a Kodak." The smaller sketch, Fig. 1 herewith, shows a fitting advised in the booklet and one that should be attached, if possible, adding greatly to the convenience. The hole for the camera should be cut about one and one-half inches from the bottom of the front and equidistant from both sides. The cover can then be hinged or screwed on. The writer prefers hinging it so that the reflector can be renewed or adjusted at will; but if hinged it must be well cleated to prevent warping and the front edges of the box against which it closes lined with some soft material to prevent light escaping from the interior. Care must be taken to fit the camera to the opening made for it in such a way as to prevent any light from leaking out. Anybody with a little ingenuity can manage this matter easily.

As to the proper light to use, the writer has used the twenty-five candle-power American tungsten, these giving a whiter light than most any other. The exposure, using three lights, will be about two minutes with an average clear negative for an 8x10 enlargement from a 4x5 negative on bromide paper.

Before enlarging, see that the illumination is even by tacking a white piece of paper on the enlarging easel and opening the lens up without any negative in the camera. Unless the illumination on the paper is absolutely even, manipulate the reflector until it is so, and then fix the reflector in place.

The writer has turned out dozens of enlargements with an apparatus made as above, and believes the idea to be original.

Our Real Riches

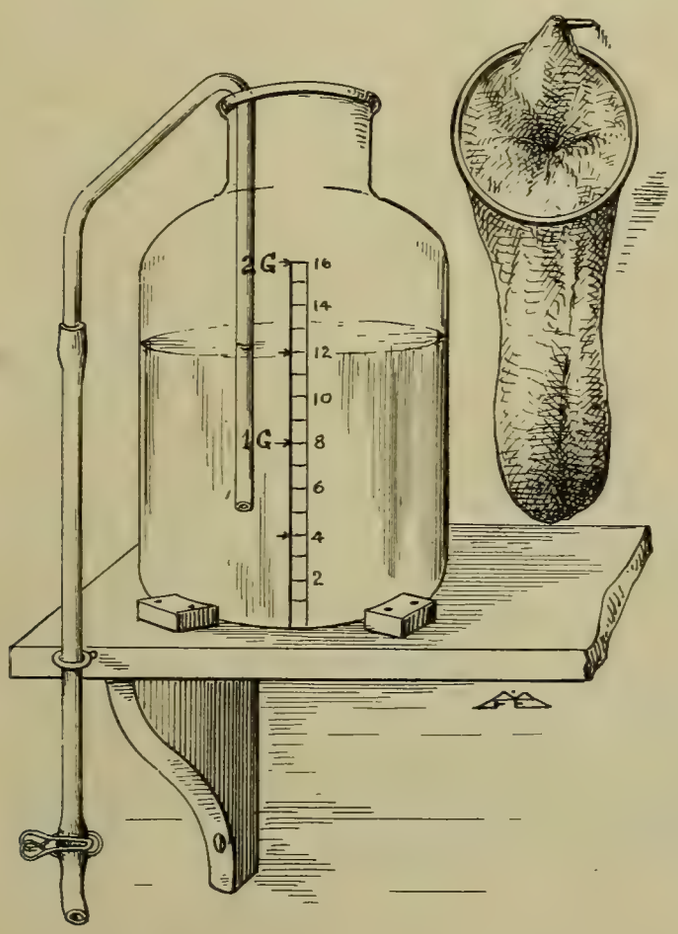
If you gather apples in the sunshine, or make hay, or hoe corn, and then retire within doors and shut your eyes and press them with your hand, you shall still see apples hanging in the bright light with boughs and leaves thereto, or the tasseled grass, or the corn-flags, and this for five or six hours afterwards. There lie the impressions on the retentive organ, though you knew it not. So lies the whole series of natural images with which your life has made you acquainted, in your memory, though you know it not; and a thrill of passion flashes light on their dark chamber, and the active power seizes instantly the fit image, as the word of its momentary thought.

It is long ere we discover how rich we are. Our history, we are sure, is quite tame; we have nothing to write, nothing to infer. But our wiser years still run back to the despised recollections of childhood, and always we are fishing up some wonderful article out of that pond; until by and by we begin to suspect that the biography of the one foolish person we know is, in reality, nothing less than the miniature paraphrase of the hundred volumes of the Universal History.—Emerson.

The Fixing Bath "On Tap"

By James F. Wood

Herewith is a photograph of a simple little contrivance that I have used for a number of years with the greatest of satisfaction. The worker who is in the habit of weighing out the crystals, dumping them into a bottle containing water, and waiting for them to dissolve, will find it a great convenience. As can be seen, it consists merely of a bag made of some coarse cloth, with a ring made of brass or copper wire at the top, a large-mouthed tin funnel, and the large bottle holding a gallon or over. The funnel, of course, goes inside the mouth of the bag when in use. If the neck of the bottle is of good, generous proportions, the use of a funnel is not necessary, particularly if the pea form of hypo crystals is used. A mark on the bottle shows just where the water comes when a gallon is poured in, and in my own practice I use the one-pound packages of hypo, so that I do not have to weigh or measure either of the constituents. The hypo dissolves very rapidly and without any stirring or bother. The two pounds that I use for a gallon of water take about fifteen minutes.



But about the fixing bath being on tap. I showed my device to a friend who is in the commercial line in a small way, and he at once adopted it with some improvements of his own. He secured a bottle that held two gallons and fixed it permanently, by means of three or four small wooden blocks nailed to the shelf and surrounding the bottle, on a shelf well up out of the way. A piece of bent glass tubing was inserted as a siphon, and to the free end was attached a piece of rubber tubing with a clip for opening or

closing. A sketch is sent herewith, as it was impossible to secure a good photograph, owing to the location. The side of the bottle is graduated, as shown, with a scale showing pints. This scale on the side of the bottle is best painted on with asphaltum paint, using a fine camel's-hair brush for the purpose; the paint, being acid and water proof, will adhere to the bottle permanently. When the bottle becomes more than half empty, water is added to raise the solution eight of these scale marks, and the bag containing two pounds of hypo is inserted and its contents allowed to dissolve, the bag rinsed out and hung on a nail near at hand. Of course, one could rig up the siphon to enter the bottle from the shoulder and thus avoid disturbing it when adding the new supply of water and the bag of crystals, but this is a refinement that would necessitate boring a hole in the bottle and fitting it with a rubber or cork ring to accommodate the siphon tube. In my own work, which is done on a very modest scale, the simple bottle shown in the photograph answers every purpose.

One's Work

The question is not, Will men honor you for your work? but, Does your work honor you? Your concern is not only to create profits for yourself, but to make that which will profit many besides yourself.—Ozora S. Davis.

DAWN

By H. D'ARCY POWER, M. D.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, JANUARY, 1910. No. 1

Which Is The Best Advertisement?

We want to know. Two of our advertisers have expressed, unasked, a desire to know; and we believe they would all like to know this: What kind of an advertisement most nearly reaches the desired object of most keenly interesting the reader in the matter advertised? We are preparing a circular letter to be sent to all our advertisers, asking them to name some prize they will award in case their advertisement is selected as the best. Should the award go to a firm that does not fall in with this idea, we ourselves will make an award of fifty dollars' worth of goods to be ordered from any one of our advertisers. The firm that came forward and made the suggestion that we hold a competition or something of the kind advised that they would, in case their advertisement was adjudged the best, award the winner a certain photographic utility valued at seventy-five dollars. This advertiser falls far short of being our largest user of space. We, of course, cannot mention firm names or goods, for the simple reason that so doing might influence the voting.

As to the voting: In our advertising pages will be found a coupon to be filled out and returned with the voter's written explanation why he selected the advertisements of the firms named, or rather, why the advertisements of those firms influenced him most favorably, placing them in the order of their appeal to him, and telling, as definitely as possible, why. We do not want to know which is the prettiest advertisement. We want to know which one is considered most capable of selling the goods. We do not want you to vote for a certain lens advertisement because you use that particular lens and have found it good. We don't want you to vote for the advertisement of a certain process because that process is a hobby of yours. What we want to know is, what advertisement has at once influenced you, or gradually done so quite strongly, in favor of the article or articles advertised. In other words, which advertisements have created the strongest desire, and why. Advertising is of several kinds, but all has the same end in view—the selling of the goods advertised. There is the dignified, unembellished statement that such goods are offered for sale. There is the advertisement that tries to furnish the reader with convincing reasons why certain goods should be given the preference. There is the bombastic advertisement that claims so much that it is discredited by the thinking reader. The advertisement that is never changed. One that is changed in wording, but never in style. One that tells the whole story and leaves nothing for the reader to desire further in the way of information. The one that hints at the merits of the goods and asks you to send for a booklet.

One advertisement uses pictures, another does not. There is one that gets right in touch with the reader and suggests that the advertiser wants to talk it over and will be delighted to answer letters concerning his line. There is another style that suggests that the reader is not to bother the advertiser, but simply be sure to get that particular brand from his dealer. The list is endless. Both the advertisers and ourselves can of course find out that one advertisement brings more inquiries than another, but the why is what we want to know. The readers can tell us. Tell us all about the one you place first on the list, but the other four can simply be mentioned briefly as to the feature considered strong. There are five advertisements to be designated, simply that the awarding may be narrowed down to a few. The winning vote or votes will be made up of five firm names placed in the order in which a model ballot is made up according to the highest number of votes for each of the five places. Let us suppose the A. B. Company gets mentioned for first place on the largest number of ballots cast. They stand as No. 1 on the prize ballot. No. 2 on the prize ballot will be selected in the same way, and so on for the five. The ballot cast containing the nearest approach to this prize ballot will receive the prize. If more than one vote duplicates this prize ballot, accompanied by the most instructive letter, giving the best reason or reasons for the selection made, will be awarded the prize offered by the firm heading such prize ballot. No vote will be accepted without a written statement from the voter, giving his reasons for the selections made. Any one can compete, and the contest will be closed as soon as we have enough votes to assure us that the expression of opinion has been a representative one. And we want to hear from all classes of our readers. It is the ordinary, every-day reader we want to get an expression of opinion from more than we do from the theorist or hypercritical stickler after style or ethical consideration. Kindly fill out one of the blanks, write us a letter telling why, and mail it to our advertising department at once. If you win some photographic utility worth fifty dollars or more, you will be well repaid. If you fail to win, you will have earned our best thanks just the same.

Good Fellowship

Good fellowship is as old as man. It is one of the elemental things, rooted in man with good and evil, love and hate. Its temples are wherever good men get together, its shrines and sanctuaries the hearts of men. More than the impetuous comradeship of youth, it is the settled faith of men in men. Passing all boundaries of nation, creed, or calling, it asks only the open heart, the honest purpose, the cheerful countenance. Its password is the kindling eye, its pledge the hearty hand; its finest messages are unspoken. It is the golden age made manifest. Rites, religion, men, and measures pass; good fellowship remains; for it is the eternal love of life, eternal faith, eternal charity and cheer.—James Howard Kehler.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

PHOTOGRAPHIC METHODS FOR DECIPHERING FADED OR BURNT DOCUMENTS.

Among the many great services which photography now renders in modern life, its use for the reproduction, or, rather, the reconstitution, of documents has become indispensable. The characteristic sensitiveness of the photographic plate allows of impressions being recorded which are invisible to the eye, and as a result traces of writing left in a document which has faded in the natural way, or has been tampered with, may be brought to light again by suitable photographic methods. Suggestions have been made, and have been put into practice, to treat such documents by chemical means, as, for example, with solutions of gallic acid, sulphide of ammonia, etc. Although these methods may at times afford good results, they suffer from the obvious drawback of injuring the original document, and in every case there is no necessity to make use of them in preference to a photographic process. The latter is sufficient to give the most conclusive results even without any chemical treatment of the document. Further than this, photography provides the only means of reconstituting written documents which have suffered damage by fire, a branch of work which is of great importance, particularly in criminal investigation. It may, therefore, be of service if a brief account of the most suitable photographic methods, many of which have been worked out by myself, should be given. We will deal both with the recovery of faded writing and of that in which a document has been more or less carbonized by fire.

Take first the case in which inscriptions have been removed by mechanical or chemical means, or have disappeared in a natural way as a result of storage in a damp atmosphere, etc. In either case the method is the same, but it may perhaps simplify the description to refer only to those of the first order.

When removing writing from a written document, other means are employed than that of mechanical erasion. Among the chemical methods which are practiced are such agents as oxalic and hydrochloric acids, applied by means of a brush, and subsequently removed with water applied in the same manner. A finely powdered mixture of sulphur and ammonium carbonate wrapped in a small muslin bag is also employed, the writing to be removed being rubbed with it. Another reagent is chloride of tin applied with a brush, and solutions of sodium hypochlorite and of chlorine water are also used.

Copying Faded Inscriptions.

By the employment of these chemical means it is not difficult to remove every apparent sign of inscription, but in the majority of cases there results at the same time a change in the color of the paper in the parts treated. The same thing happens in almost every case where writing has disappeared by natural process of time aided by keeping in improper conditions. This change of color is frequently very small and imperceptible to the eye, but in the majority of cases it can be brought to light by the photographic plate. For example, the portions which have been treated, or where the writing has disappeared, will have become yellowish and a negative made on an ordinary plate will show this portion as of lesser density than the rest. Conversely, paper which had in the first place a faint yellowish tint and had been treated with a bleaching liquid will reveal the fact by the removal of the color, a change which is shown in the plate by the greater density of the treated portion. As will be supposed, these operations are not as easy in practice as they look in theory, and a good deal of patience and many attempts are necessary before

conclusive results are reached. The following is the method of working: The document to be examined is placed in a printing frame behind a plain piece of glass. It is exposed to as uniform and intense a light as possible, preferably direct sunlight or the light of an arc lamp. A series of exposures on ordinary plates and with different times of exposure will show the operator the nature of the treatment which the original has had, or of the vanished writing. As already said, the part of the negative in question will be lighter than the remainder if a solution has been used giving a yellowish tint to the paper, whilst on the other hand the density will be greater where a yellowish paper has been bleached. The amount of the contrast in such cases may be intensified by using a blue filter, preferably a glass cell containing a solution of copper sulphate to which ammonia is added, giving a clear blue solution.

The negatives obtained in this way are printed on paper giving plenty of contrast. A very suitable print is the Carbon Velox, or the special Rembrandt papers made for getting strong prints from weak negatives. Some further methods of increasing the contrasts are given below.

The Use of Enlargements.

All these operations serve not only to show markings produced by a chemical treatment of the document, but they disclose writing which has been removed by an eraser or by the destructive action of time. If all trace has disappeared so far as the eye can see, it is more than probable that minute traces of black ink or particles of yellowish oxide of iron or other coloring matter remain in the body of the paper, and their existence may be brought to light by taking steps to record such minute differences of tint. In many cases it is advisable to make use of enlargement upon a considerable scale in accordance with the following method: The original is placed in a printing frame along with some finely printed matter by which an exact focus can be obtained. It is strongly lighted by sunlight or arc light, and enlarged direct in the camera up to at least two diameters: all the better if the degree of enlargement is four to five diameters. The blue filter already recommended is used, and a normal exposure given. The most suitable developer is one acting slowly, such as ferrous oxalate. A negative having been obtained showing traces of the writing, a print is taken on paper. Frequently at this stage the writing is very feebly reproduced, and special means require to be taken in order to obtain a sufficient exaggeration of the contrast. This may be done, as has already been said, to some extent by a suitable choice of printing paper. Another means is to print through a yellowish or green glass, a method which can be used with print-out papers and with those which are developed. In the case of the former, exposure is commenced without the colored screen, and as soon as a sign is seen of the inscription, the remainder of the printing is done with the colored filter.

Intensification with mercury, as also reduction, may be used to intensify the contrasts, but about the best plan is to combine the two operations. The negative having been thoroughly cleared of all trace of hypo by means of a weak (one per cent) solution of ammonium persulphate made slightly acid with sulphuric acid, it is again washed, and, after drying, treated with the bichloride bath. The bleached image is then darkened with an ordinary developer, and, by properly adjusting the degree of reduction and of after intensification, this method will considerably increase the contrast.

Greater Contrasts by Copying.

But the best means for securing an increased degree of contrast is to make a second negative via a positive transparency. This allows of the first negative being retained intact as made in the enlarging camera. A positive transparency is prepared by contact on an ordinary plate, the weak light of a match burnt about twenty inches from the printing frame is used for the exposure, and a strong developer well restrained with bromide employed to get a vigorous positive, which, if necessary, may be intensified with mercury and a developer, reduced, and again intensified, as directed above. This positive will show a much greater contrast than the negative from which it was made, especially if a slow plate and ferrous oxalate developer be used. A precisely similar

procedure is employed for printing a second negative from it.

One last method, very difficult in manipulation, but capable of greatly enhancing the contrasts, is to make a series of negatives from the same original and, stripping the films from the glass supports, to lay them one on the other. This is by no means an easy business, but results which I have obtained in this way have been most satisfactory. Still one further method should be mentioned, namely, the so-called chromolytic process of Burinsky, in which the work is done by the wet collodion method. The manipulation is long and complicated, and can only be recommended to those making a specialty of this class of work; used with skill, however, it gives very striking results.

Preparing Partly Burnt Documents.

There are many occasions on which it is very important to decipher writing from printed documents which have been accidentally or intentionally destroyed by fire. Obviously, this can only be done if the carbonized document has not fallen into pieces. Frequently the text can be read, but the document cannot be preserved on account of its fragility. In treating such cases, the following process is employed: The burnt paper is laid on a sheet of glass and carefully unfolded. As most papers cockle up whilst burning, the task of evening them out is surrounded with the greatest difficulties, but these may to a large extent be overcome by spraying the burnt paper (by means of an atomizer) with a fixative such as is employed for fixing crayon or pastel drawings. The particular fixative which I use is that of Dr. Schoenfeld & Company, of Düsseldorf. After this treatment, the paper is much less fragile, and may be spread out on the glass by the aid of a couple of small, soft brushes. When this has been done, the glass plate bearing the paper is placed in a printing frame and finally gently but strongly pressed between two glass plates. It is then in a state for copying by direct sunlight or strong arc light. In the case of writing inks composed of iron, it will be found that the writing can be seen as dark gray on the black ground of the carbonized paper. On then exposing an ordinary plate, slow and restrained development with ferrous oxalate will give a satisfactory result. In the case of printed originals, or documents made in Indian ink, the writing will be as black as the ground. In this case the plate and its treatment are selected as already described. In cases where the writing has been produced by aniline inks, or by vegetable solutions, it will be found that at this stage there is nothing visible to the eye, but an orthochromatic plate and a colored screen will give a negative showing traces of the inscription, the contrast being worked up by the means already mentioned.

Paper bearing writing done with an iron ink presents no difficulties in photography when the paper has been entirely calcined, not merely carbonized; the writing appears brownish on a white ground. However, an original of this sort is so extremely fragile that the mechanical difficulties of obtaining a photograph are very great indeed.

In cases where it is desired to obtain copies of a burnt paper on which writing has been done in pencil, the photographer's task is by no means easy. The following method communicated to the International Congress of Photography at Liége some years ago has given very good results, and by means of it a number of pencil notes made on paper which had been burnt were successfully deciphered: The original is laid on a horizontal copying board, or, if it has become crinkled, is pressed in a printing frame; in either case the surface is placed at an angle of about sixty to sixty-five degrees to the axis of the lens. The lighting is provided solely and only by an incandescent gas burner provided with a reflector. This burner is placed to the side of the original remote from the lens, so that the rays fall upon the surface at an angle of about thirty degrees. A yellow-sensitive plate is used. The rays are reflected by the inscription, and the latter can sometimes be faintly seen on the focusing screen. In the negative the inscription is thus obtained in black on a more or less transparent ground. A very protracted exposure requires to be given.—Translated by the "British Journal of Photography" from Dr. R. A. Reiss in the "Bulletin Photographie de Belge."

THE LENS FACTOR.

In the text-books and instructions of our day there is a tendency to simplify at the expense of strict exactness; indeed, simplification of expression in technics is a necessary consequence of that brevity which is the tendency of the time. Speaking generally, technics cannot be brief and at the same time exact.

The public require, or think that they require, extremely simple schemes of exposure, and, as a consequence, simple and easy systems are provided, the "lens factor" being often entirely neglected.

An excellent reminder of the importance of the "lens factor" (as distinguished from the aperture factor or diaphragm factor) is to be found in one of the recent articles on photography in the "Westminster Gazette," where it is pointed out that the usual commercial forms of lens may vary in practical or useful intensity to the extent of about fifty per cent of the whole illumination; that is to say, when stops of equal focal aperture are used (f-11.3, for example). A highly complex anastigmat may give about half the effective exposure which a single lens would give.

The above is substantially true, and data leading to it are to be found in the standard works on photographic optics, but when old, tarnished, or second-hand lenses are concerned, the difference between the various types of lens may be very much more pronounced; hence, when a lens factor is introduced into a calculation for exposure, the condition of the lens should be considered as well as the type. In attempting to find a lens factor for a tarnished lens of complex type, there may be a surprisingly great error unless an actual test of the speed of the individual lens is made; indeed, I suppose that no discreet person ever buys an old lens without such a trial—that is to say, if the lens is bought for use, and not as a mere curiosity or object of interest.

It may then be taken for granted that the true "lens factor," as incorporated with the more reliable systems of actinometry, only applies to lenses in practically new condition. Thus in the case of the Hurter and Driffield actinograph now before me, there are, on the lens scale, three marks for each chief focal aperture; and in reference to these it may be well to quote from the accompanying booklet (2d edition, 1892, page 8): "These three marks, 1, 2, and 3, correspond respectively to single lenses, doublets, and triple combinations. There are only two marks, however, for intermediate ratios of the decimal system, that is, for single lenses and doublets. The triplet has in this case been omitted in order to prevent confusion, but its place can be easily judged by the eye, should it be required." It may be remarked that, at the time this particular instrument was made (about 1892), lenses with more than three elements were so unusual as not to require consideration.

An estimate of universal applicability cannot very well be made, as there are so many special circumstances to be considered, but I believe there is a sort of unwritten custom among working opticians to allow five per cent for the loss of light at each reflecting surface, whether from air to glass or from glass to air; at any rate this estimate may be taken as approximately correct for average lenses and average polish and finish. To give some kind of documentary support to this estimate, I may refer to page 79 of the 1899 edition of Dr. Rohr's classic work on the photographic lens ("Theorie und Deschichte des photographischen Objectivs"). The loss by reflection due to two surfaces is taken as about nine and one-half per cent; four surfaces, somewhat over eighteen per cent; and six surfaces, almost twenty-five per cent.

Taking the five per cent basis, the following table shows the percentage of light which will pass or remain effective after incidence upon the specified number of reflecting surfaces; it being understood that this only applies to lenses that are in new condition. The odd numbers have no importance in relation to the every-day use of ordinary lenses, but they are retained in order that the full sequence may be realized. Each surface, it should be understood, obstructs five per cent of the remaining light, not five per cent of the original light.

Although a few modern tele-photographic combinations may go beyond fourteen air surfaces, it is scarcely necessary to carry the table farther, and for most practical purposes the above table will serve for introducing the "lens fac-

tor" into exposure systems, but only for lenses that are in good condition.

0	100
1	95
2	90.2500
3	85.7375
4	81.4507
5	77.3782
6	73.5093
7	69.8339
8	65.3423
9	63.0252
10	59.8740
11	56.8803
12	54.0363
13	51.3345
14	48.7578

Quite apart from mechanical damage of kinds and sorts which only an expert is likely to detect, lenses lose rapidity by alteration of the substance of the glass, darkening of the balsam, and, most of all, by damage to and dulling of the surfaces of the glass, so that any table for loss of light in the case of old, carelessly kept, or second-hand lenses must be rather conjectural, but the following table may serve as an approximation; or perhaps I may express the opinion that it is exceptional to meet with a second-hand lens which has a rapidity greater than that indicated, many being far worse. The basis of the estimate is that each air surface of the old or second-hand lens obstructs ten per cent of the light incident upon it, as against five per cent for the new lens, but the estimate (which is very general in its nature) includes a rough guess as to the other influences or sources of deterioration above mentioned.

Table for Old or Second-hand Lenses.

0	100
1	90
2	81
3	72.9
4	65.6
5	59.0
6	53.1
7	47.8
8	43.0
9	38.7
10	34.8
11	31.3
12	28.2
13	25.4
14	22.9

The above two tables illustrate the greater risk in buying a complex lens second hand than in buying a lens of simpler construction; thus a simple landscape lens may be about ten per cent the worse for second-hand disintegration, while if the like method of estimation is applied to a five-glass (ten air surfaces) system, the estimated effect of the disintegration by use and time is the difference between 59.8740 and 34.8, or about twenty-five per cent of the original light, or twenty-five per cent worse.

In order to prevent misunderstanding, it may be well to point out that a single landscape lens has two air surfaces, but no air gap; a cemented doublet has four air surfaces and one air gap; a three-element system, as a triplet, has two air gaps and six air surfaces; a four-element system has three air gaps and eight air surfaces; a five-element system has four air gaps and ten air surfaces. Element in this paragraph stands for a unit having two air surfaces, and the unit may be a single glass or a cemented group.

The focal aperture expression, as used in those instructions as to exposure which take no account of the lens itself, should be regarded as an expression referring to aperture only, or to an imaginary or ideal lens. For exact work an allowance should always be made for the kind of lens used and for its age or condition.—T. Bolas in "Amateur Photographer,"

(The above considerations are worthy of very careful attention by the photographer about to replace a rectilinear working at, say, f-8 by an anastigmat at f-6.8. If this be for the purpose of its higher light-carrying capacity, it may well happen that he will make a poor as well as an expensive exchange.)

MORE SOAP BUBBLES.

A correspondent writes that, while he has not tried the formula given in a recent issue, he has often used the following with good results: Take equal parts of yellow rosin and ten times their weight of water, and boil all together. One ounce of this solution added to three or four ounces of water affords bubbles that are thin and permanent. This may interest some of our readers as an alternative formula.

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

AN IMPROVISED DRYING RACK.

A Canadian subscriber, Charles G. Johnson, of Winnipeg, tells in a recent letter how he overcame the difficulty of drying his negatives safely during a camping trip, where dust and insects were well in evidence. He secured an orange box, a paper of tacks, and a yard or two of cheese cloth of the backwoods grocer, who acted as their base of supplies.

A few tacks were driven into the bottom of the box from the inside to keep plates resting thereon and leaning against the sides from slipping down. One thickness of the cheese cloth was tacked all around the box and a long flap left to come over the top and form a lid. The plates deposited inside the box, the flap brought over the top, lid fashion, and the whole thing could be carried and placed in the most desirable position for the rapid drying of the negatives without fear of dust or insects damaging the wet films. The idea is a good one and one that it will be worth while remembering in case one is using plates under like unfavorable conditions.

SOME CHEAP DISHES.

An amateur of an economical and tinkering turn of mind showed me some handsome home-made dishes the other day. He first supplied himself with a "form" in the shape of a block of wood just the size he wished the inside of his tray to be. Next he soaked a lot of torn-to-size sheets of brown paper in water to soften them; and, while they were soaking, added some bichromate of potassium to the melted glue he intended to use, about fifteen grams to the ounce. The pieces of brown paper were then laid out, print style, on a sheet of glass, and the surplus water mopped off with a sponge. The top sheet was placed on the form and worked down around the edges, a coat of the bichromated glue applied and another sheet placed over it and in turn pressed down close all around. The work has to be carried on in a dim or artificial light, or the bichromated glue would become insoluble. As each layer of damp brown paper is glued into place, the paper-covered form is carried out and allowed to stand in the sun for an hour or so. Finally, the paper coating of several thicknesses is trimmed off level all around the edge and a sheet glued to the inside is brought over the edges quite well down on the outside. A final coat of Probus or some hard enamel paint is given the whole. It would seem that such a tray could be easily constructed, and, what is more, of almost any shape or size. I am going to try my hand at a grooved developing tank in the near future. It would seem that I could use a dozen of my 5x7 waste negatives, placing a piece of cigar box between each, as a form. Where the paper fell into the interstices formed by the wood holding the negatives apart, grooves would be formed that would exactly receive the 5x7 plates after the tank was completed ready for use.

SEASIDE WORK.

An out-of-town reader says he will be in the city shortly; and, if an opportunity presents, would like to run out to the beach for a few wave pictures. He wants a few hints on the subject. First and foremost, do not imagine a high shutter speed is necessary. As a rule, from one-tenth to one thirty-fifth of a second will give a more plastic and "wet" effect than the high speeds so often used by inexperienced workers. If your picture contains both water and sky, give about one-fourth the exposure required for an open landscape. On the other hand, if large rocks, particularly if wet and partially in shadow, come into the view, sufficient exposure should be given to assure detail in these portions. The ordinary landscape can show quite large areas devoid of shadow detail without seriously offending, but our seascape or wave picture is so obviously a portrayal of some-

thing in which the eye can see detail throughout. Much of the success of seashore photography depends upon careful development of the negatives. The exposure made on water and sky alone will be inclined to give a flat result, no matter how correctly timed. Such exposures should be first placed in a developer containing only about one-quarter or one-third the normal amount of alkali, where, if development proceeds all right, they may be allowed to finish. If they show signs of holding back or being too contrasty, the withheld alkali should be added to the developer and a tendency to softness secured. Where the shadow side of wet rocks occupies some space, they are inclined to come out clear glass in the negatives unless the developer is well diluted and the pyro or other developing agent kept low in order to avoid blocking up any high lights, like the crest of waves, before full detail is obtained.

THE SIZE OF THE SUN.

A Tennessee correspondent asks if a print, the landscape portion of which was made with a ten-inch lens while the sky, including the faint image of the sun, was taken with more than double that extension, gives correct proportion. I believe the plan given is the only one in which one can get the image of the sun of the desired size to appear right, particularly if the sun is pictured as being anywhere near the horizon. With a ten-inch lens, the sun's image would be little larger than a capital O of the type on this page, while if you ask an artist to sketch in a sun near the horizon of your landscape taken with the same lens, he would make it at least half an inch in diameter. Note the relative size of the sun's image in the next painting, or reproduction of a painting, that you happen to see.

CARBON PRINTS FROM SOFT NEGATIVES.

A Chicago correspondent wants to know if there is a brand or make of carbon tissue suitable for some rather soft negatives he has been making in order to get quick printing quality for gas-light papers. The large manufacturers in England, from whom our supplies come, make three grades, ordinary, hard, and transparency. The latter comes only in one or two colors, I believe; at least, the dealers here list only two, as a rule. If all obtainable contrast is desired without having recourse to intensification of the negatives, use the transparency tissue and sensitize in a very weak bichromate bath, say one of only one per cent. Remember that the weaker the bath the longer the exposure required. The regular tissue may respond sufficiently to this plan of reducing the strength of the sensitizing solution; and, if so, it will be preferable, as the transparency tissue does not give the same amount of detail. We have heard of a sensitizing bath as weak as one-fourth of one per cent being used, but fear that this would hardly be enough to make the working of the process satisfactory.

PAINTING BACKGROUNDS.

Stretch strong calico on a wooden frame. Then size it with a paste formed by boiling a mixture made by working four ounces of starch into twelve ounces of water. Apply with a stiff brush. When this is dry, put on, with a small whitewash brush, paint made as follows:

Mix together thoroughly:

Whiting	15	ounces
Glue, powdered	5	ounces
Cane syrup	8	ounces
Water	3	quarts

Then add:

Lampblack	1¼	ounces
Ultramarine	¾	ounce
Venetian red	¾	ounce

This paint must be kept hot over a fire while being applied.

IMPROVED SEPIA TONING.

Mr. Nordell, of the Photo Craft Shop, recently showed me some very fine sepia enlargements, which he explained were sulphide tones in much the usual way. The variation consisted in giving the prints a preliminary bath of five minutes in the regular sulphide solution diluted to one-fourth its regular strength. The prints change color somewhat and refuse to bleach out as thoroughly when they come to the bleaching bath, but the final results are improved in tone and there need be no fear of the slightest tinge of yellow after the sulphiding following the bleach. It is well to caution the reader that too long washing between bleaching and sulphiding is the mistake made by nearly all taking up this beautiful process for obtaining sepia tones on bromide and developing papers.

Club News and Notes

Club Secretaries and others will oblige by giving us reports for this Department.

PHOTO-SECESSION EXHIBITION.

An exhibition of monotypes and drawings by Eugene Higgins, of New York, was held at the little gallery of the Photo-Secession, 291 Fifth Avenue (between Thirtieth and Thirty-first Streets), New York, opening on November 27th and closing December 17th. The gallery was open from ten a. m. until six p. m. daily, Sundays excepted.

The next exhibition, opening on December 18th, will be devoted to a series of lithographs by Toulouse-Lautrec. The gallery will be open from ten a. m. until six p. m. daily, Sundays excepted.

THE CLEVELAND CAMERA CLUB.

Cleveland has now a camera club. On the evening of November second, an enthusiastic handful of camera workers organized the Cleveland Camera Club, under the auspices of the Cleveland Central Young Men's Christian Association, the purpose of the club being to increase the efficiency of both beginners and advanced amateur photographers.

The first regular meeting, which was held two weeks later, closed with the names of forty-one charter members on the rolls. The election of officers resulted as follows: E. A. Ruggle, president; G. E. Berdge, Vice-President; G. P. Rodgers, Secretary and Treasurer; and the first two with J. C. Ulmer and L. C. De Groodt forming the Executive Committee. E. G. Kermode and V. P. Terrell were appointed a Membership Committee. Following the election, a Constitution and By-Laws were drawn up and accepted. The remainder of the evening was made quite social in tone by those present looking over each other's prints, each member having been requested to bring at least three.

Regular meetings are to be held on the first and third Tuesdays of each month; the following programs having been arranged:

December fourteenth: Mr. Sheets, of the Eastman Kodak Company, will give a demonstration of Velox paper.

January fourth: House warming, donation party, and magazine talk. Donations to consist of any useful apparatus, books, or pictures, to become the property of the club.

January eighteenth: Flash light demonstration by Mr. Norton.

February first: Talk on Animal Photography by W. T. Higbee, and exhibition of flash-light pictures by members.

February fifteenth: Lantern-slide demonstration by Mr. Lehman, and exhibition of animal photographs by members.

March first: Demonstration on trimming and mounting by Mr. Appel; lantern-slide exhibition by members.

March fifteenth: Talk, "How Lenses Work," by Mr. Warner, of Warner & Swasey.

THE LATEST "CAMERA WORK."

The October number of this beautiful work is just to hand, and to say that it is even better than any of the recent issues is saying a great deal, as every issue is a delight to the eye and the heart of the photographic artist. The leading article, or rather, the first article, taken in connection with the seven handsome photogravures of prints by the master, D. O. Hill, is one of the most valuable contributions to photographic literature that has appeared for a long time. Four other illustrations and several most interesting articles make up the feast of good things so artistically presented. The issue is somewhat late, owing to Mr. Stieglitz's unwillingness to have it issued other than under his own supervision, he having but recently returned from abroad. The publication is a quarterly, six dollars and fifty cents a year. Despite the price being rather high, it is, beyond doubt, the best value in a photographic magazine available today. Published by Alfred Stieglitz, 1111 Madison Avenue, New York City.

International Photographic Association

THE STEREOSCOPIC DIVISION.

I must request that all members sending stereoscopic slides for the circulating sets hereafter kindly send them mounted, titled, and with their name and I. P. A. number on the back of mount. One of the former directors made it a practice to do this work for the members, but this does not seem advisable, and I have not the time for the work. Much of the success of the results depends upon the correct trimming and mounting of the pictures; and, when it is not done by the individual members, criticism of the work is of course inapplicable.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4950 Washington Ave., Chicago, Ill.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Hy. C. Ferris, Director Post Card Division, Box 760, Denver, Colorado.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more of their average cards to the Director for approval. On the correspondence side of such cards should be placed the title, together with such data as hour, light, stop, plate, and exposure, if possible. If cards are of the requisite quality, the Director will authorize the placing of the letter "X" after the member's number, indicating membership in the Post Card Division. A new notice will be given under the heading of "Renewals," if desired. Also ask for a new exchange notice when you renew your subscription. When writing the Director requesting reply, kindly inclose stamp. Address, Hy. C. Ferris, Lock Box 760. Denver. Colorado.

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CANADA.

Album Director—C. H. Foster, Kerwood, Ontario, Canada.

Secretary—J. A. Waddell, Kerwood, Ontario, Canada.

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Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

Kansas—H. H. Gill, Hays City.
Minnesota—Charles P. Wegner, St. Cloud.
Mississippi—Willis Proutt, Institute Rural Station, Edwards.
New York—Louis R. Murray, Ogdensburg.
Oregon—F. L. Derby, La Fayette.

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Texas—Frank Reeves, Graham.
Utah—John C. Swenson, A. B., Provo.

NEW MEMBERS.

2197—Arthur J. Thompson, 747 S. Los Robles, Pasadena, Cal.
Class 3.

2198—Crescencio Retiz, R. F. D. No. 2, Box 63, Luling, Texas.
3¼x4¼ up to 6½x8½ on developing and printing-out paper, of out-of-door scenes, landscapes, busts, full figures and groups. Desires only post cards, lantern slides, and stereoscopic views. Class 1.

2199—Albert Allain, Stratford, Wis.
Class 3.

2200—Norman L. Simms, 5 Allman Ave., San Rafael, Cal.
3½x3½ on Solio, of all subjects, for unmounted prints and post cards. Class 1.

2201—Willis Prout, Institute Rural Station, Edwards, Miss.
Class 3.

2202—H. H. Wiles, Chicosa, Colo.
Class 3.

2203—W. D. Leonard, 519 W. Perkins St., Hartford City, Ind.
4x5, 4¼x6½, and 6½x8½, local views and stereos, for post cards and stereos only. Class 1.

2204—Walter J. Haggard, Box 481, Fort Bragg, Cal.
Any size up to 10x12, chiefly developing paper, of portraits, landscapes, seascapes, redwood views, etc., for anything interesting; no particular choice. Class 1.

2205—Richard Beitz, Perham, Minn.
4x5 and smaller, developing paper, landscapes and outing views, for same, chiefly post cards. Class 1.

2206—H. H. Hanson, Box 103, Omak, Wash.
Post cards only. Class 1.

2207—Norris W. Jaquay, Box 795, Canastota, N. Y.
4x5 on developing and self-toning papers, of landscapes and scenic subjects. Landscapes and mountain scenery specially desired. Want only mounted pictures and post cards. Class 1.

2208—J. F. Brown, Box 133, Las Vegas, Nev.
2½x4½ on developing paper, of landscapes and anything out of the ordinary, for subjects of the same character. Class 1.

2209—Clement W. Lowe, 6630 Germantown Ave., Philadelphia, Pa.
3¼x5½, 4x5, and 5x7, developing paper, of street, park, and Wissahickon views, for Western life, scenery, etc. Class 1.

2210—Elgin Lessley, 1619 S. Tejon St., Colorado Springs, Colo.
5x7 and enlargements to 10x12, on developing and bromide papers, of landscapes and mountain scenery; for landscapes, water scenes, and animal pictures. Class 1.

2211—E. G. Overholt, Box 200, Hamilton, Canada.
Class 2.

2212—T. J. Soares, Box 63, Hayward, Cal.
5x7, developing paper, landscapes and wild flowers. Desires same; no public or private buildings, and only good work. Class 1.

2213—E. H. Webber, Orleans, Neb.
8x10 and smaller, developing paper, pictorial landscapes, river scenes, Western life, sod houses, etc., for pictorial subjects of any kind. Class 1.

2214—Chas. W. McQuigg, 309 W. 40 Place, Los Angeles, Cal.
3¼x5½, on various papers, speed work, child portraiture, and landscapes, for any of these. Class 1.

2215X—S. S. Webb, 410 Thorn St., Warren, Ohio.
Post cards only. Class 1.

2216X—A. M. Vinje, 610 W. Fourth St., Superior, Wis.
Post cards only. Class 2.

2217—Bertha Clement, Beaverton, Ore.
Class 2.

2218—Miss Carrie Anondson, R. F. D. No. 2, Fish Creek, Wis.
5x7 and smaller on developing paper, scenery, bluffs, bays, woodland and winter scenes. Desires 5x7 or larger, marines, landscapes, sheep and cattle studies, etc. No post cards. Class 1.

2219—M. O. Johnson, R. F. D. No. 1, Thor, Iowa.
Landscapes, animals, birds, out-door portraits, etc., post cards and stereo views, for any subjects in post cards and stereo form. Class 1.

2220—H. W. Terhune, St. John, Wash.
Class 2.

2221—E. D. Guthrie, Port Angeles, Wash.
Post cards only. Class 1.

2222—O. K. Phlegar, M. D., Crandon, Va.
5x7, on developing paper, of landscapes. Desires only 5x7 landscape views. Class 1.

RENEWALS.

376X—A. H. Hooper, 9 S. Main St., Jamestown, N. Y.
Post cards only, developing and printing-out paper. Class 1.

379X—Ed. L. Graybill, 1115 N. McKinley St., Canton, Ohio.
Post cards only. Class 1.

739—Wharton Schooler, R. F. D. No. 2, Eolia, Mo.
4x5, 5x7, and post cards, on developing paper, of historical subjects, bridges, farm scenes, animals, cyclone, and other subjects of interest; desires foreign and interesting subjects, mostly post cards. Class 1.

744X—Frank L. Church, 143 Trinity Ave., Lowville, N. Y.
Post cards and stereoscopic views, developing paper, of landscapes, public buildings, etc., for like work. Class 1.

937X—E. A. Woodard, R. F. D. No. 2, Fairoaks, Cal.
Post cards and stereoscopic views. Class 1.

1785—D. D. White, American Falls, Idaho.
Class 2.

1867—A. G. Lindgren, Verndale, Minn.
3¼x5½, 3½x12, and post cards, on developing paper, of Minnesota views, for views of Utah, Washington, Oregon, California, and Canada. Prints preferred. Class 1.

1992X—G. J. Schuur, 160 Da Costakade, Amsterdam, Holland.
4x5 to 12x16, on all kinds of paper, including carbon, of Dutch landscapes, city scenes, and geographical views, for post cards, 5x7 and stereo prints on paper. Class 1.

2000X—Oliver Clemetson, Orfordville, Wis.
4x5 and 3¼x5½, unmounted prints. Class 1.

2009X—Dr. C. F. Meacham, Bellows Falls, Vt.
Class 2.

2074—I. M. Reed, 660 61st St., Oakland, Cal.
Class 3.

2098—Miss Ruby Shaw, Box 10, Wolfville, Nova Scotia, Can.
3½x3½, on developing paper, prints or post cards, local, child studies, and out-of-door views. Desires anything of interest, views or landscapes preferred. Class 1.

2140X—Cleo L. Bowerize, R. F. D. No. 2, Greenwich, Ohio.
2x2 up to 8x10, including post cards. Class 1.

2144—W. M. Horton, Fairmont, Okla.
Post cards and 3¼x5½ prints, for anything of interest. Class 1.

CHANGES OF ADDRESS.

1746—Ben W. Ward, Seligman, Ariz.
(Was Laguna, N. M.)

1747—W. C. Cosby, care Hotel Grace, Abilene, Texas.
(Was Paris, Texas.)

1801—F. H. Smith, 1340 Kensington, Youngstown, Ohio.
(Was 300 Elm St.)

1897X—Hubert C. Mohr, 220 Mill St., Poughkeepsie, N. Y.
(Was De Graff, Ohio.)

2069—F. H. Schultz, Highland Park Station, Des Moines, Iowa.
(Was Ypsilanti, N. D.)

2091—J. F. Peters, 6220 Berthold St., St. Louis, Mo.
(Was 4008 Flad St.)

2094—Walter F. Schultz, 466 Frank St., Huron, S. D.
(Was Cavour, S. D.)

2110—Chas. W. Baker, Box 66, Clark, S. D.
(Was Raymond, S. D.)

CORRECTIONS.

2185—Gabriel P. Flores, Ph. D., College of Physicians and Surgeons, San Francisco, Cal.
Desires to change from Class 1 to Class 2.

2107X—A. H. Williams, 145 N. Fifth St., New Philadelphia, Ohio.
State wrongly given as Pennsylvania in November issue.

2160—M. Rousselot, 11 rue Nationale, D'evian-Les-Bains, France.
Number wrongly given as 2197 in last issue.

Our Book Shelves

READING FOR SPARE MOMENTS.

We all of us have spare moments; we have a twenty or thirty minute ride night and morning; we have spare quarter and half hours continually. Afield with our camera and they come in at intervals during the day. But the writer has recently discovered an admirable plan for putting them to good use. A copy of "As a Man Thinketh," by James Allen, fell into his hands, and its handy size and clear type caused it to go into the pocket for possible use during a car ride. It was found most entertaining. It did duty on several other car rides and was promptly replaced by others of the series, four in all. In addition to the title given, there are: "Out From the Heart," "Through the Gates of Good," and "Morning and Evening Thoughts." They are just the books for the purpose; if you are going for an outing, the pleasure is intensified; if you are in need of encouragement and inspiration, the author furnishes it; if you are on your way to collect a bad debt, the task is made less disagreeable. And they only cost fifteen cents each, postpaid. Try one and you will want more. Get them of the Sheldon University Press, Libertyville, Illinois. And ask them for a catalogue of the many other excellent and inspiring books they are publishing for the benefit of the busy man and woman of today.

"PHOTOGRAMS OF THE YEAR 1909."

As this series of "Photograms of the Year" grows, its individual numbers become more and more indispensable to the worker in photography who would keep himself informed of the progress of picture-making with the camera. Like its predecessors, "Photograms of the Year 1909" reproduces a large, varied selection from the best pictures of the year by workers of many different countries, some of which have been seen at the great exhibitions and other which have not yet been exhibited. The pages of "Photograms of the Year" are rich with interest and suggestion. The illustrations, with their lessons for the pictorialist, can be profitably studied, and in the text we have papers on pictorial photography by the editor, by Robert Demachy, M. M. Leon, F. Matthies Masuren, and Walter Burke, covering the progress of the pictorial movement in France, Germany, Spain, and Australia. The most notable contribution is that by the editor on "The Work of the Year," which describes and criticizes the illustrations given in the book, with notes on the great exhibitions. We know of no work more profitable in suggestion and example for the pictorialist than "Photograms of the Year," and advise our readers to get this new volume and study its pages, as a sure means of progress. It is edited by H. Snowden Ward, has one hundred and sixty pages, with about two hundred illustrations. Paper covers, one dollar; cloth bound, one dollar and fifty cents. American agents, Tennant & Ward, 122 East Twenty-fifth Street, New York.

"BRITISH JOURNAL ALMANAC, 1910."

This ever-welcome annual has made its appearance and will of course have its usual large sale. Almost five hundred pages are given over to an epitome of photographic progress during the year, and all the new apparatus and supplies are described. The editorial article dealing with lens calculations is an excellent one. Including advertisements, the book contains over thirteen hundred pages. It would seem that practically every manufacturer of photographic and kindred goods is represented in its pages. It can be obtained of all dealers or direct from the American agents, George Murphy, Incorporated, 59 East Ninth Street, New York. Paper covers, fifty cents, postage twenty-seven cents; cloth binding, one dollar, postage thirty-seven cents.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

"PHOTOGRAPHISCHER ABREISS-KALENDER, 1910."

This is a handsome wall calendar about the size of our own pages and forming a pad about as thick as three or four of our issues. Each leaf carries a handsome reproduction of a photograph, with, in nearly every case, a valuable formula, photographic method, or informative paragraph. It is printed in German, which, to a certain extent, limits its value except in the case of those who can read that language. But our German readers should not fail to secure a copy. It is published by the well-known house of Wilhelm Knapp, Halle, A. S., Germany. Price, two marks; postage, sixty pfennigs. Such of our readers as may wish a copy we will order sent direct to them for sixty-five cents.

"MULTIFICO."

This is the name of a handsome little publication got out by the Multiscope & Film Company, of Burlington, Wisconsin. Drop them a line and ask to have your name placed on the mailing list. It, of course, aims to impress you with the quality of the goods manufactured by this well-known firm; but it also contains a number of valuable hints each month and a good picture or two.

"THE MARVELS OF PHOTOGRAPHY."

This lecture-demonstration, arranged by H. Snowden Ward, F. R. P. S., will be first given in this country under the auspices of the New York Camera Club, at the end of the second week in January. It is booked by the Professional Photographers' Association of New York for Buffalo on February fourth, and also for New York City. By lecture courses it is arranged for Pittsburg, Cleveland, and cities in the New England States, including Concord, Exeter, and others. Negotiations that are in progress with a number of organizations seem to promise a comprehensive course through the Eastern States. Mr. Ward has also booked a considerable number of dates for his lectures on literary subjects: The Canterbury Pilgrimages, Shakespeare at Home, and the Humor and Pathos of Dickens, all of which are illustrated with slides by Mrs. Catharine Weed Ward.

A POST CARD CAMERA.

The popularity of the post card size of camera is by no means fleeting, and one of the best values in that popular size is the camera being sold by J. M. Hamilton, of Waterloo, Iowa. It is different from any of the others on the market, and different in such a way that it is commending itself to some of the best workers. It will interest you, their Catalogue C, so send for a copy before the matter is forgotten. Their advertisement appears on another page.

"WELLCOME'S EXPOSURE RECORD FOR 1910."

Do not neglect getting one of the new "Wellcome's Photographic Exposure Record and Diary for 1910," before you make a single exposure for the new year. If you used one last year, this reminder is not necessary; you have already ordered one. It is a habit not easily broken. The mass of information which its thin paper leaves are made to contain is something to wonder at. Take and figure it out and you will find that the same amount of matter if set in type of the ordinary size and printed on ordinary paper would make quite a bulky volume. And, what is more important, you would have considerable difficulty in finding a volume in which the information had been so carefully selected, boiled down, and otherwise made as valuable as is the case with it. It costs only fifty cents and we can guarantee you full satisfaction. Address Burroughs, Wellcome & Co., Department P, 45 Lafayette Street, New York.

FLASH-LIGHT WORK.

Run through our advertising pages, carefully though, and send for all the booklets that are offered on flash-light work. When they arrive, read them through, and, our word for it, you will know about all there is to know about that kind of work. The Eastman Kodak Company will send you one; the Tolidol people have one they are too modest to mention, and the latest is the one the Agfa people are putting out. Nichols' book at ten cents is worth much more than the price; the Victor catalogue and the Luxo booklet should not be overlooked.

WILLIAM L. FINLEY, LECTURER.

W. L. Finley is a Western man, born in Santa Clara, California, August 9th, 1876. He is a graduate of the University of California, and, since his graduation, has been employed as a magazine writer. Mr. Finley, with Herman T. Bohlman, spends much of his time with camera and notebook tramping the mountains and cruising lakes and rivers in the search of first-hand material on bird and animal life.

The hardest trip in Mr. Finley's experience, and one that came near ending his career, was in the summer of 1906, when he visited some of the rocky islands off the southern coast of California. While hunting an eagle's nest that could be photographed on San Clemente's Island, the horse that he was riding fell and threw him headlong among the rocks. His lower jaw was fractured on both sides, several teeth shattered, his tongue and face badly lacerated, and wrist sprained, besides numerous other bruises. With all his injury, Finley had grit enough left to remount his horse and ride several miles back to camp. Here a launch was secured and, through a heavy sea, they made a thirty-mile run to Avalon, Catalina Islands, during the night, and the next afternoon Finley was taken to a hospital in Los Angeles, where he had his wounds sewed up and the bones set without the use of anesthetics.—Portland Oregonian.

MR. WARD'S ACTIVITIES.

H. Snowden Ward informs us that, although he has relinquished the editorship of the "Photographic Monthly," founded by Mrs. Ward and himself in January, 1894, the change will leave him even more closely in touch with technical and pictorial photography. He will continue to contribute to his old magazine, and will also contribute to the principal British weeklies. He expects to spend at least three months at the beginning of each year in the United States and Canada, lecturing and in the interests of the "Process Engraver's Monthly" and of "Photograms of the Year," which he will continue to edit. During January, February, and March his address will be 122 West Twenty-fifth Street, New York.

THE VULCAN PLATE.

The Defender Photo Supply Company, of Rochester, New York, trade agents for the Defender Dry Plate Company, of Wayne Junction, Philadelphia, send us the following and request its publication:

"The Defender Dry Plate Company announces the marketing of a new dry plate, the Vulcan Dry Plate. It is a product of one price, one speed, and one quality. The Vulcan Dry Plate is built to compete with any dry plate on the market and show more quality than the best. It is the result of three years of constant effort to make a dry plate that combined the two essentials necessary to a successful reception by the intelligent photographic trade. These essentials are speed and quality. Without being unnecessarily verbose, we can say truthfully that in competitive tests with plates of recognized highest standard, the Vulcan Plate proved itself faster and of better quality. Already we have numerous testimonials from large consumers, stating this fact in unequivocal terms."

The Defender Photo Supply Company is one of the oldest and most reputable organizations in the photographic world. Its statement should be authoritative and trustworthy.

THEIR POPULARITY INCREASING.

The increased popularity of the Series VI Cooke lenses is due to the possession by them of an unusual number of desirable qualities. As an anastigmat portrait lens they have a wide range of usefulness. The mere revolving of the front portion of the mount to a given point secures that roundness and softness that the skilled portraitist desires in large heads, while the same action results in considerable gain in the depth of focus

obtained. As the softness secured is easily regulated, even from the back of the camera while focusing, this power becomes particularly effective in the making of groups and figure studies. With this revolving portion of the lens mount set to its farthest limit, mathematically sharp definition is secured throughout the plate, even at the full aperture of F-5.6, making the Series VI Cooke capable of fine work in copying and enlarging for which the other series are noted. The lenses are extremely compact, being less bulky than others of the same focus and aperture, making them suitable for outdoor commercial work, with or without focal-plane shutter, as desired.

THE CORRESPONDENCE CAMERA CLUB.

The Secretary of the above-named club has sent us a proof of a new prize offer they will be sending out about the time this issue is mailed. It certainly offers a bargain to amateur photographers who are interested in some sort of a society of the kind, and we would advise our readers at least to send for one of the circulars and investigate the matter. Address the Secretary, P. Mitchell, Helmetta, New Jersey, and ask for a copy of the "Prize Circular."

THE NEW GOERZ CATALOGUE.

The new Goerz catalogue maintains the high standard which this firm has established in that line. It contains many fine illustrations showing what Goerz lenses will do in different departments of photography. There is also considerable valuable information contained in the notes on astigmatism, spherical aberration, coma, curvature of field, depth of focus, speed, covering power, and angle of view. Lens formulas make it possible for the reader to find the relation between size of image, focal length of lens, size of image, hyperfocal distance, and so on. Calculations covering the exposure in telephoto work are also included. Hints concerning the most desirable of the Goerz lenses for different classes of work are also given. A copy of the catalogue can be obtained, either direct from the New York house or from Hirsch & Kaiser, 218 Post Street, San Francisco, California, for three two-cent stamps.

A SUGGESTION FOR THE DULL MONTHS.

With the holiday rush over and the dull winter months ahead, live studios and kodak dealers are on the lookout for ideas that will brighten up these slow months. A good part of this time should be spent in building up and developing lines that have been slighted in the busy season. Enlarging is pretty sure to be in this class, and yet enlarging, when properly pushed, is one of the most profitable side issues in the business. Many leading studios never let an order leave the house without an attempt to sell at least one enlargement, and it pays them well. With the enlargement there is always the chance of selling a frame with its added profit. These do not have to be the old crayon-finished pictures (?), as so many believe. A good negative will nearly always make a better straight enlargement than if worked out with the air brush or crayon, and is much cheaper to make. Fix up a few attractive samples in the different sizes. Go after every sitting, and at the same time remember that there is a good field in working up enlargements from the negatives already in your file. It means dollars just when dollars count, dollars that are nearly all velvet. The kodak dealer has the same condition to meet, with kodaks laid away for the winter and business dead. Get after your customers and get them interested in enlarging. Few of them know much about it; but, when shown just what can be done with their own films, they will become enthusiasts. You have the time now, and a little work at this season will pay well and lay the foundation for a good business in the busy months. Hunt up some of the old customers whose interest in their kodaks is dead, and get them started. It will pay just to get them going again. If you are not equipped to do your own work, send it to the Photo Craft Shop of San Francisco, California, whose ad appears on another page. They make a specialty of enlarging and general work for the trade, doing the work better and cheaper than is possible for the man who only goes into the enlarging room occasionally. Send for their price list and trade discounts. It will be a surprise to find how cheaply the work is done, and at the same time done well.

ol. XVII No. 2 FEBRUARY, 1910 Price, 10 Cent

Camera Craft

San Francisco, California

Cyko Buff is

the three-in-one process

Carbon, Platinum and D.O.P.

CYKO BUFF has the brilliancy of platinum, the delicacy of carbon, and the tonal gradation of Cyko, plus D. O. P. simplicity. The Cyko Buff print by Buckley at the last convention of the Photographers' Association of America was pronounced one of the fifteen most notable prints in the hall

Ansco Company

Binghamton, N. Y.

HIS LITTLE BOAT
By MARGARET E. MANS

Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, FEBRUARY, 1910. No. 2

The Superiority of Tank Development

By L. C. Fountain

Illustrated by the Author

"FEEDING TIME."
Out-doors in Shade, U. S. 8, 1-25 Second.

AMATEUR photographers of today are, as a general rule, of a progressive nature, but it is surprising to note how many cling to the old fashioned, tedious method of developing separately each and every plate and film. Nothing is more tiresome or disagreeable than to work in a hot, stuffy darkroom, by the light of a ruby lamp, during the summer months; and for this reason many persons give up photography during the warm months of the year, just the time when the most beautiful pictures are obtainable.

I purchased my first camera nearly seven years ago, and, during six years of that time, was a slave to "individual development." However, that mighty thing called Progress overpowered and compelled me to adopt the tank.

WHILE THE TANK DOES THE WORK.
Bright Sun Outside, U. S. 8, 5 Seconds.

It might be well for me to state that I have used dry plates exclusively; not because of prejudice against films, which may be obtained in several convenient forms, but because my camera is constructed for plates only; and, as I have never had the opportunity to do much traveling, when lightness and compactness of apparatus is a very great advantage, I have never purchased a film camera, nor an adapter which would enable me to use roll films or film packs in the camera I possess.

My developing tank is, therefore, constructed to receive plates. It holds one dozen, but any number less than that may be developed, and the ease and facility with which the work is done can only be appreciated by persons who have tried this method of developing.

Even while I am writing on this little article, which I hope will have an influence for the better on some of my brother amateurs, I have in my tank five plates. The developer used is one of the many reliable now on the market, and is prepared for a twenty-minute period of development. An alarm clock, which was set at the time the developer was poured into the tank, will tell me when the twenty minutes have expired, and it is time to pour off the developer, give the plates a couple of rinsings in water, and pour in the hypo. After fixing, the plates will be rinsed for half or three quarters of an hour under a spigot, then taken out of the tank and placed to dry. All these operations will be done without removing the plates from the

A GOOD JOKE.
By L. C. Fountain.
Out-doors in Shade.
U. S. 8, 1-25 Second.

tank, except to ascertain when all traces of silver have been removed by the action of the fixing bath.

The reader will readily see that a great deal of time and patience is saved by working in this modern, up-to-date manner.

Now, I presume someone has wondered how the plates are transferred from the holders to the tank. I do this in a small clothes closet which I discovered would answer the purpose of a dark-room for the short time one is required. For persons who are not so fortunate as to have a closet sufficiently dark, I recommend a changing bag. This may be purchased for a nominal sum from almost any photographic supply house; or, if desired, one may be made out of several thicknesses of black cloth, and some strong elastic bands which are to be hemmed in where the arms go into the bag.

I have tried to impress upon you the ease with which negatives may be made by the tank way of developing, but I presume I should have spoken first of the quality of the negatives obtained as compared with the old way, for nothing is more disastrous in photography than to sacrifice correct results for ease and comfort.

It is not my desire to laud the quality of work I have done with the camera; but, in order that the comparison I am about to make between the old and the new method may be fully appreciated, I had better state that my negatives, up to the time I purchased a tank, were far above the average of amateur work. My work has received honorable mention in photographic contests, and I have had photographs highly complimented by one of the most eminent professional photographers in the city of Washington.

"CONSIDER THE LILY."
Cloudy, F. S. 8, 1-5 Second.

Notwithstanding the fact that I obtained good results from hand development, I have had far better and more uniform success with either twenty-minute or one-hour development in a tank. It makes no difference whether my exposures are snap shots, short-time exposures out of doors, or portraits which require in doors from two to

five seconds, they are all developed at the same time, in the same tank, and with the same strength developer.

With exposures that do not too greatly overtax the latitude of the plate, most ideal results may be obtained with the tank; and, where plates have been grossly under or over exposed, the fault may be remedied, by the use of a good reducer or intensifier, as well as, if not better, than by the most judicious restraining of over exposures or forcing of under exposures in a tray.

Another advantage of the tank is the comparatively even temperature maintained throughout development. Every amateur knows, or should know, that a developer, to give normal results, should be kept between sixty-five and seventy degrees Fahrenheit. To do this while developing in a tray, the operator must test the temperature of his developer, or, as is done by a great many, get the correct temperature for the first negative, and trust to luck on the rest. Tanks are constructed about two inches longer than

INTERESTED.
Window, Cloudy, U. S. 8, 5 Seconds.

SISTERS.
Skylight, F-11, 1 Second.

the plates; consequently, as warm developer always rises to the top, development is completed before there is any material change in the temperature of the solution immediately surrounding the plates.

Most persons are anxious to see the results of their exposures, but are compelled to wait until they return home from a vacation; or, if they are at home, to put off developing until after dark and all the other members of the household have retired. Not so the person who is equipped with a tank for his roll films, or a changing bag and a tank for his plates or film packs.

Then, again, when you go camping or on your vacation, does not photography have more charm when you know that you can see the results of your work at any time and in almost any place?

Especially is prompt development advantageous when one is traveling, for very often a picture is taken and under or over exposed beyond any power of redemption. If the subject is one to make the photo of great value, immediate development will show the error of exposure, and a new trial may be made before leaving the locality.

A developed plate or film is much less liable to damage by certain climatic conditions than one which is undeveloped, and this fact may be added as another reason for prompt work.

Many persons who do not wish to undertake the task of making their own negatives hesitate to purchase a camera because of the expense of hiring the work done. To such persons let me say that five cents' worth of developer, used in a tank, will develop one dozen 4x5 plates or films, while the cost of having the work done, in many cases, not properly done, by some person who makes a business of finishing pictures for amateurs, would be thirty or forty cents; and, with the tank, there is no such word as "bother."

Only today I called on a friend whom I had induced to come over to my way of thinking, and, to say that he is delighted with the new method is speaking mildly. He showed me a snap shot taken under a porch on a rainy day. Of course, an exposure made under such trying conditions could not be expected to yield the best result, but, with proper selection of paper upon which to make a print, this negative will make a passable picture.

In concluding this little article, I might add that the tank is not for amateurs alone, for I am informed on good authority that some of the best professional photographers use the tank for developing their portraits; and what is considered good by members of the profession should not be turned down by the amateur.

A CALIFORNIA VIEW. By J. CHITTENDEN.

Success as a Professional Photographer

The "Old Man" Writes a Letter to Dave

By Walter Thurston

My dear Dave: I am pleased to learn that you are about to start in business for yourself, and I feel flattered at having you write and ask for my advice as to doing so. I have watched quite a number of youngsters start out with high hopes and a few hard-earned dollars, some to succeed and others to fail, and, perhaps, a long letter from me will not be entirely a matter of labor lost.

Success is, in no small measure, a matter of mental attitude. You can start out with the idea that you are a photographic genius, that everybody with a particle of sense will recognize the fact from the shape of your back as you walk down the street, and, consequently, you cannot fail; but the chances are that you are just an ordinarily good photographer; and, if you are a genius, the public is too busy with other things to discover the fact. So with that frame of mind you are pretty sure to turn out a failure. On the other hand, you can have a settled conviction that you are just an ordinary individual with a good working knowledge of photography, but possessed with a willingness to work; and, by all that is great, you will succeed by hard work. And by hard work I do not mean the doing of some drudgery that you can hire done for a few dollars a week. I mean the hard work that is involved in a constant watch over your habits, your treatment of your patrons, your conduct of your business, and your care to retain the hard work idea. You will find all these, and a few other things, even harder work than sweeping down the stairs with a short handled brush.

As I understand it, you are going into a town where you are practically unknown. This is somewhat of a handicap, but I can appreciate your unwillingness to start in direct opposition to your employer with whom you have been working since you left my place for a better position, five years ago. As the town is not such a very large one, it will take the inhabitants but a short time to "size you up." You are like a stranger going into a lodge room. Everyone, except the newcomer, knows everybody else, and so their attention is concentrated upon the stranger. The stranger may be introduced to every person present, may have a few words with nearly all of them, and yet not be able to recall a single individual's name should he meet him on the street the next morning. Yet each one of the roomful will recognize the stranger at a glance, recall both his name and the estimation they placed upon him the night before. Realize this condition and carry yourself accordingly. As you go up the main street, after the first day spent in putting things in shape, everyone is a stranger to you; you may feel that you are an entire stranger to them all, and that a drink at the corner saloon will not be noticed. You will argue that, later,

as you become acquainted, you can be more guarded in your conduct. The idea is a mistaken one. Half the town will observe and comment; the new photographer is starting in bad; the first place he visited was a saloon.

If you have not yet selected a location, get one on the main street of the town, even if the rent is twice as high as it is for an otherwise equally desirable place a little off from the leading thoroughfare. Even should every resident be made to know quite well the location of your studio, they will not feel the necessity of having pictures taken nearly as strongly as they would if they had to pass your display every time a member of the family does a little shopping. In a town or small city the difference between the rents of the desirable locations, directly on the most traveled side of the main street and side streets that only see a portion of the population as a rule, is not very great. The difference in business opportunity is greater than the difference in the rent. And there is another reason why the most desirable location should be selected; so doing does not leave an inviting opportunity for a competitor to come in, secure the better location, and, with a bolder display, at least draw enough business to change your profit to a small figure. One of these chaps that move periodically was in to see me the other day. He had found a fine town in which to open up. There were three studios there, but they were all on side streets.

And when you get this good location, remember that you are paying so much for the room at your disposal, plus so much for the number of people who pass your door. The United Cigar Stores Company pay some of the highest rents in the cities in which its stores are located, and find it profitable. They know it will be profitable before they move in; in fact, they take long leases, when obtainable, before going in. And how do they know? They station a man there, and he counts the number of people passing that point. So many people are worth so many dollars on the rent. That is, ordinary people, such as they can expect as patrons. A large rush of factory hands in a hurry to reach their work, or later their homes, at a certain brief period night and morning, does not count for as much as a like number with more leisure and scattered over a longer period. Do not forget that you are paying so much a hundred for the people passing your door. Then, perhaps, you can realize the importance of using this material that costs you good money each month. Look at the successful merchant's store, and you will find that it is impossible to get past it without knowing that he is there, what his name is, and what he is dealing in. If he is a grocer you will find the goods crowded out on the sidewalk every morning, or displayed in clean, handsome show windows. And the same in other lines. Use every inch of your front to compel the most casual passer's attention to the fact that there is a photographic studio at that point. There are photographers right in this big city, paying the high rents demanded for prominent locations, whose entrances are so disguised that even the man who takes their stock order each week mentally locates them as next to such-and-such a store that shouts to him as he approaches the photographer's door. Do not let a single man, woman, or child get past without knowing that your place of business is there. If you

BRANDING CATTLE IN BRITISH COLUMBIA. By A. E. FYALL.

can't do anything else, put out a big sign, fresh paint, and hire a man to paint the front a different color every day. After getting that far, do not stop. Your next aim is to make as many as possible stop and examine your display as they are passing. You will never get too many to do that. And keep it up. The amount of business you do will be in almost direct proportion to the amount of attention your display attracts as long as the attraction is put forward in a dignified and consistent manner.

I would not buy out another studio except on the score of economy. People unconsciously bestow upon a certain place of business, and the business itself, their estimation of the man who has conducted it for some time. If that impression is not a good one, you have it to overcome, and the process is a slow one. If their impression is a good one, they somehow seem to fail in carrying it over and bestowing it upon the new man. Start a new place if you can. If you do take a studio that has been run by someone else, change it as much as possible so that everybody will at once recognize that a new man is running it. Don't humbug yourself with the idea that by buying out so-and-so you are getting rid of a competitor. You simply confess your weakness by so doing. The ideas of the average photographer concerning competition are curious things. This chap that was in here the other day has the right one. He picked out a town with three studios in it, when he could have gone into another, as large if not larger, only a hundred miles up the road, where there was as he expressed it, "one studio and a piece of one." And why didn't he take the one studio town. Simply because the man who ran that one studio had the business all tied with a rope. He belonged to several of the best lodges, he took an

interest in the advancement of the town, was a member of the "Boost" committee, was a school director, was welcome at every home, and so on down the list. My visitor further explained that the fact of the smaller town having three photographers proved conclusively that not one of the three was a hustler, or he would have discouraged at least one of the other two by absorbing more than his own share of the work.

And don't, when you come to fit up, hold any foolish ideas about making the place home-like. I know two studios where this idea has been allowed to have full play. One looks like the home of a prosperous negro barber, making money running three shops, and the other suggests the parlor stage setting in a ten-cent theater. The studio isn't a home; and, if it was, it couldn't be made to agree with the varying ideas of your patrons as to what home should be like. It is the work room and business place of a man who is supposed to be somewhat artistic, somewhat businesslike, and somewhat educated and refined. It should echo, to a certain degree, all of these qualities, while conforming in some degree to the average tastes of his patrons. That is all there is to it. The inside of a boiler shop does not embarrass the visitor nearly as much as would an attempt to portray his supposed idea of a homelike place. The first is consistent, the second never. A visitor is in little danger of feeling constrained and unnatural because the studio does not contain a burlesque upon his own home furnishing.

Do not crowd your rooms. Your customer comes there for one purpose, and either yourself or your reception room attendant goes forward to meet him with a like single purpose. The less there is to detract the easier the work becomes. Your personality has a chance; there is no distracting influence. The customer is not forced to get his impression of you and your work from a jumble of talk, personal appearance, distracting surroundings and unexplainable arrangement of the crowded "fittings." The room, like a quiet frame, should not demand attention; it must merely serve its purpose as a setting. The customer, and no two are alike, is not being constantly shouted at, according to his education and temperament, by this or that feature. Nothing offends, nothing disturbs. Avoid cheapness, avoid display, avoid crowding. The rest is easy.

Keep a full record of every customer and his order. Keep as complete a card system or set of books as possible. If you do not understand this part of the work, call in some young fellow with a knowledge of working systems, talk over your requirements with him, and get him to start you right. He will feel flattered at being consulted; doubly so if the system he proposes is adopted. But do not thrust any of this system before your customers. Mrs. Smith, the wife of a prominent merchant, does not like to feel that she is known by a number as are factory hands. Neither does she care to be told that the making out of a card showing just how much she has paid and how much remains unpaid, is of more importance to you than that she be given your close attention during her visit. Keep it all out of sight. It is Mrs. Smith who does you the honor to visit your studio; it is Mrs. Smith who is having her picture taken, and all the way through until the delivery of the finished work, Mrs. Smith is still uppermost. For

all Mrs. Smith is made aware, she is the one customer who has been given full and undivided attention. Of course, Mrs. Brown gets her picture taken at your place as well, and no doubt was given attention and all that, but she was not allowed to subtract from the attention Mrs. Smith received as her due. Certainly you have not been so unappreciative as to number Mrs. Smith in regular order along with a lot of other people who were just as important to you simply because they came for a dozen pictures.

But the real reason for having a complete accounting system of some kind is this: At any time you may desire, or at regular intervals, you can take off a trial balance and know just where you stand. You can compare the last period with the one before and learn whether you are making more or less than you were at a former period. Open an account with the local bank, even if it be a very small one. Deposit all your cash and collections,

YACHTING ON THE SCHELDT. By VICTOR SELB.

and pay out all money by check against your account. The fact that you do this gives you a certain amount of standing, both with the business men of the town and with the stock dealer with whom you trade. And always take the cash discount on your stock bills, if possible. If the dealer gives you two per cent he is really discounting his profits about twenty per cent. He sells you a bill of goods, amounting to one hundred dollars. He gives you a two per cent discount, two dollars. The goods cost him, say seventy-five dollars. It costs him about fifteen per cent "to do merchandising"; that is, to handle the goods. Only ten dollars is clear profit. In giving you two per cent of the whole bill he is practically giving you twenty per cent of his profits. And he gladly does this, as it enables him to do his own buying

closer, taking the discounts his wholesaler allows him. Another advantage of doing all your business through the bank lies in the fact that, as fast as your checks are cashed, you have a receipt for the payment which each one represents. This in itself is enough of an argument in favor of the plan.

Assuming that you know exactly how you are doing, financially; that you are confining your buying to one or two good houses and paying cash as a rule; you will find that the salesmen and demonstrators will visit you quite persistently. There will be a great temptation to treat them somewhat as if they were bores or annoyances. Don't do it. The most successful photographers in the country are the ones that enjoy the closest good-fellowship with these men of the road. They are always full of good ideas. What you should do is to be receptive and learn all you can. They know that you cannot buy all the different lines they represent. They do not blame you for sticking to the goods that you find satisfactory and suited to your needs. Neither are they possessed of such superior knowledge that they can tell everybody just how to made a success of the business. Most of them are men who have made a failure of a studio of their own. But that is not the idea. This one has just come from a town where he picked up a good ideat that may fit in with your methods. The other can show you how to make a certain kind of lighting that seemed to evade your best efforts. The third is the bearer of still another valuable piece of information concerning the success of another man who has just tried a newly advertised utility that you were in doubt about buying, and so on down the line.

But this letter is already too long. If you will write me and advise as to the lines upon which you would like information, I will do all that I can to help. In doing this, let me know also what your own ideas are on the various subjects. Tell me what you have in mind, what you propose to do, and what methods you think you will use. Then I will try to write you another letter and one that will deal more with the practical, everyday work of the new place.

Wishing you all kinds of success,

"THE OLD MAN."

Selling Photographs Promiscuously

He blew in, all of a hurry, and asked to see "some of the very latest styles of photos for the young ladies, bless 'em." Being shown a bunch, he suddenly swooped down on one, of a well known society miss, and asked: "How much shall I pay you for this one?"

Greatly surprised seemed the poor fellow when the answer came: "One dollar, if you bring the lady's written order." "Why, she is out of town," he pleaded. But the rules of the house were strict, and, "No order from the sitter; no picture goes," caused his departure to be empty-handed, sadder and wiser. Try the plan; it will help you in many ways, as it has —"OLD FORTY."

Little Miss Muffett

By Edgell R. Plaisted

Illustrated by the Author

"THAT FIRST GRAY HAIR."

THERE is an old legend, probably a Persian one, that to the dog was given the spirit of a noble and faithful man and to the cat that of a beautiful woman. And, though we may not believe this mythical old tale, it cannot be denied by those who know her well that pussy has many winsome and feminine traits. Her glances are softly kind, coy or scornful as her humor at the moment may dictate, her touch is full of feminine daintiness and lightness, and her grace of pose and movement never deserts her for an instant, not even when her heart is full of hate, revenge, or murder.

While vanity is by no means an exclusively feminine trait, yet milady has always been credited with a fondness for her mirror which milord seldom shares; and, as proof that pussy is equally fond of the reflected image of her own loveliness, I offer these photos. Remember, they were not posed by Sarony, and my model was no experienced prima donna, able to express any desired emotion at a moment's notice.

Little Miss Muffett is only an unsophisticated country lassie, a genuine backwoods beauty. Her airs and graces have not been acquired at a fashionable seminary or finishing school, but are the natural expression of those primitive instincts which have come down to her through countless generations, perhaps even from that far remote ancestress of the old legend.

You first see her making a most searching examination of her own thoughtful countenance as reflected by the glass. Do you suppose she is looking for traces of crow's feet at the corners of her Oriental eyes, or has she just discovered that first gray hair? Never mind, Miss Muffett, a woman is only as old as she looks; and, so long as you retain those youthfully graceful curves, no one will be so unkind as to speak of you as "that old cat."

Next, she is practicing the high hand shake that she may make an im-

"THE HIGH HANDSHAKE."

pression on callers at her Thursday evening receptions; and doesn't she do it with quite the approved and proper air? Oh, blood will tell. After all this exertion, she sinks back in graceful negligee and lazily manicures her pointed and polished nails.

Cats have at least one masculine attribute, and by catering to this I was able to secure these swiftly shifting poses with very ordinary apparatus. This weakness is a liking for their own personal comfort. The pictures were taken in mid-winter, and that spot of warm sunshine on the fur rug is the secret of Miss Muffett's docile yielding to my photographic intentions.

The lens was an anastigmat, used wide open; but the shutter was a common affair and set at about a tenth of a second. Roll film was used and the focusing done by scale, though screen focusing would be preferable for work of this class. Needless to say, I took a number of pictures, in which the movement caused a bad blur, in order to get these where no motion of consequence is visible.

"IN GRACEFUL NEGLIGEE"

"IN A JUVENILE ROLE."

Judging by her kindly smile in the second and third portraits, no one would dream Miss Muffett had a temper far more in keeping with locks of Titian hue than with her own Quakerish garb. But I surmise Sarony himself could, if he would, a tale unfold of wrathful glances from greenish eyes that seem to swear at one from out a pretty or bewitching face. Possibly her well-developed vocal accomplishments give pussy a right to indulge in the whims and caprices of other grand opera stars. What if she does now and then fly into a tantrum and use her nails in most unladylike fashion? Is it not a matter of musical history that, on at least one occasion, Romeo descended from the balcony of his loving and sweetly warbling Juliet and turned to a great audience with blood running down his face?

In her next sitting, Miss Muffett poses in a juvenile role, and it is hard to realize that the look of confiding innocence and infantile curiosity which the mirror reflects belongs to the same mature person who so thoughtfully contemplated the ravages of that thief and robber, Time. Lastly, Miss

"KISSING HER OWN PRETTY REFLECTION."

Muffett forgets the presence of the camera entirely and gives herself up in utter abandonment to vain admiration of her own charms. Oh, fie, Miss Muffett! you are actually kissing your own pretty reflection in the polished glass. But we know your dislike for water too well to fear that you may ever meet the fate of Narcissus and perish for love of your own reflected beauty as imaged in some sylvan pool.

I have another set of pictures, of a dignified and elderly feline gentleman, who strenuously objects to my piano playing, but that is another story.

DOROTHY. By JENNIE PATTERSON.

What a Photographer Can Do

By William Wolff

MR. BOWMAN MAKING A BLOCK.

THERE is a photographer in Pendleton, Oregon, that I like to call on every time I am in that part of the country. His name is W. S. Bowman, and the name is connected with good, matter-of-fact photography, by the residents of that section, in such a way that there is no danger of competition winning their trade away, even were Mr. Bowman less respected for his sterling worth as an enterprising and hard-working citizen.

He made his first negative in 1885, became deeply interested in the work, and decided to embark in photography as a profession. Self-taught, and with only an ordinary amateur outfit, a 5x7 camera, and a few of the necessary accompaniments, he came into Pendleton and sought such view work as he could find during the summer of 1887, and that winter moved into a cheap frame building at the end of the bridge which spans the Pendleton River, which flows through one side of the town, several blocks from the business section. The location was far from an ideal one, but Mr. Bowman was not dependent upon location. While doing portrait work, and doing good work at that, he seemed to be almost constantly afield. His fine collection of Indian negatives and large assortment of typical harvest scenes, the latter of an interest almost as unique as attaches to his Indian studies, on account of the exceptional opportunities that Oregon farming operations present, both testify strongly as to his untiring energy and appreciation of the pictorial. With low rent, small expenses, the hard work which he seemed to like, and the constantly increasing business which could not but result, money was made and placed aside for sound investment.

Realizing that the growing city in which he was located would, in fact was, rapidly enhancing the value of the property upon which the old frame studio stood; realizing that it would soon be desirable business property, its purchase was negotiated. Of course, a growing business required more room, and a new building was contemplated. Running across an advertisement of a concrete block machine, and knowing that the location of the lot on the river bank necessitated concrete foundation at least, Mr. Bowman decided upon concrete block construction for the building proper.

The foundation was started in March, 1907, and finished up to the first floor nine months later. On the river side it is eighteen feet deep, thirty inches wide at the bottom, and twelve inches at the top. The new building

AN EARLY STAGE. NEARING COMPLETION.

being much larger than the old one, the building of the foundation did not prevent the continued use of the latter, in fact, the old building was used as a studio until the first story of the new one was completed. With the new foundation in place, the old building was moved back about three feet, by the simple expedient of using a few jack screws to slide it along on an extension of its foundation. This allowed the front wall of the new building to be put in place.

Winter being the dull season, in out-door work at least, the making of the blocks was commenced the following January, the basement of the old studio being used as the factory. By the first of June, nearly all the blocks were made, some twenty-four hundred, 8x8x16 inches in size. The pictures herewith tell the story of the successive stages from the commencement of the first story to the completion of the building. The large picture extending across the page is in striking contrast to the one shown across the top; not only in the studio itself, but in the character of the buildings which flank it from behind on Main Street, two-story substantial business buildings having taken the place of the smaller frame buildings of no particular type or utility. And yet, such growth is nothing unusual in any of the towns and cities of the Northwest. But, despite the certain growth of these towns, it is not to be imagined that all one requires is a knowledge

THE ORIGINAL STUDIO BUILDING.

of photography and the ability to turn out pictures. Mr. Bowman is, and always has been, an apostle of hard work and persistence. One of the pictures shows two stone masons at work, while another shows a number of carpenters and their helpers who were put to work in order that the new building might be ready for occupancy as soon as possible after the tearing

THE HANDSOME NEW BUILDING AS IT NOW APPEARS.

down of the old building which it enclosed, until the structure reached the second floor. All the blocks were made during spare hours by Mr. Bowman himself, although not in the garb in which he is shown in the picture used as an initial; and he also constructed all the framing for the foundation and the back wall, and filled them in with the concrete. The building is fifty-eight feet deep, fifty-two feet wide at the back, and thirty-seven and one-half feet wide at the front. Besides the studio and work rooms, it contains three modern flats of five rooms each, with bath. About two years were spent in the construction. The property is now worth many times its original cost, is bringing in a handsome little income in the way of rentals; and, while costing about eight thousand, five hundred dollars, is all paid for, with its owner still able to write his check for a neat little sum. The property extends to the middle of the river, and good trout and perch fishing can be enjoyed from the porch on that side of the house.

There is a moral, I think, in this plain, unvarnished tale. And the moral is not alone to move into a growing town in the great Northwest. Hundreds of photographers are doing that right along. They are even doing better; they move every year or two, some of them. The real moral is this: Enterprise and industry require only the opportunity, and opportunities are plentiful. At least, the kind of opportunities that the man of Mr. Bowman's calibre requires. As Bill Barlow says: "Opportunity knocks once on every door—but sweeps out mornings for the man who helps himself."

FIRST AID TO THE INJURED. By MRS. E. A. CORWIN.

A Simple Finder

By William H. Blacar

THE SENTINEL. By M. A. YAUCH.

IMPLY the upper, right hand corner of my camera box is my favorite finder. To use it I merely grab my camera with both hands in any old way that seems convenient, taking care that the release trigger is convenient to one finger, hold the camera on a level with my eyes, sight along this corner to that part of the view I want in the center of the plate, and press the trigger. It is surprising how near the center of the plate I will get the part sighted on, and also, how easy it is to estimate, by the distance, just how much of the view will come on the plate. Of course, if the camera is one of the folding type, one that does not have a corner at the front, one can secure the same condition by erecting a small upright from some part of the front, and of the right height, and use that as a sight in connection with a like sighting point at the back. An ordinary pin driven into the leather cover of the back, near the center, and an ordinary lead pencil fastened with a rubber band to one of the uprights between which the front moves, serves admirably with that type of cameras.

In using my finder I can not only see the moving objects I am trying to photograph, but I can see all that is going on around both these objects and myself. This enables me to snap them at just the moment when they suit my ideas, and also allows me to avoid passing teams or persons. Just try my plan on a trotting horse or something of the kind and see how easily you can follow him and snap the shutter when he is just where you want

him. I think my finder is the best for several reasons. It never gets broken or lost, never gets out of order, and can be used in any light in which photographs can be taken.

I have used other finders with much less satisfaction. The small ones show a small image, and one that is often very indistinct on account of poor light or the strong reflection caused by light from a bright sky. Very often by the time one decides just what he does see in the finder, he doesn't see it, and the picture is gone. The direct vision finders that go on top of the camera are better, but they are in the way and inclined to get knocked off or broken.

The reflecting form of camera is better than these last; but, even with one of them one does not see what is going on around him. Besides, the camera is held at the height of the waist, which, in many cases, is much too low to give a picture as the eye sees it. Very often there are people, bushes, fences, or other objects directly in front of the camera where they block out the view completely unless the camera can be held at the eye level at least. My finder may not be absolutely accurate or theoretically correct, but it gives me a surprisingly large per cent of good, well centered pictures of moving objects, gives them to me with the minimum amount of trouble, and that is what I want.

Art, The Liberator

Art it is, then, which can give to modern humanity what it most needs—the means of attaining the full life. Here lies, unless I am deceived, the greatness, the lofty mission of art in a democratic society which rests on a civilization, the marks of which, the real condition of which, are severe specialization and division of labor carried to an extreme.

Art raises man out of industrialism and introduces him to a higher world. In this artist-created world the man who is bundled together stretches himself straight; the shriveled broadens out; the fraction of a man becomes complete. Here he who belongs to his machine or observation-instrument becomes once more a free man and citizen of the world, a man participating in the life of the community, and enjoying with the rest all the beauties of heaven and earth, all the greatness of heart and soul of the pick of men. Through art a person imprisoned in his daily avocation comes into communion with all civilization. Here is the paradise to which the astronomer descends from his constellations, to which the miner ascends from his pit, in order to participate in the same joys and raptures, to bring to flower whatever potentialities they possess.

The mission of art in society present and future is, in short, to liberate the prisoner of subdivided labor, to restore the dignity of manhood to the being degraded into a little wheel of a machine.—Max Nordau.

A Difficulty Overcome

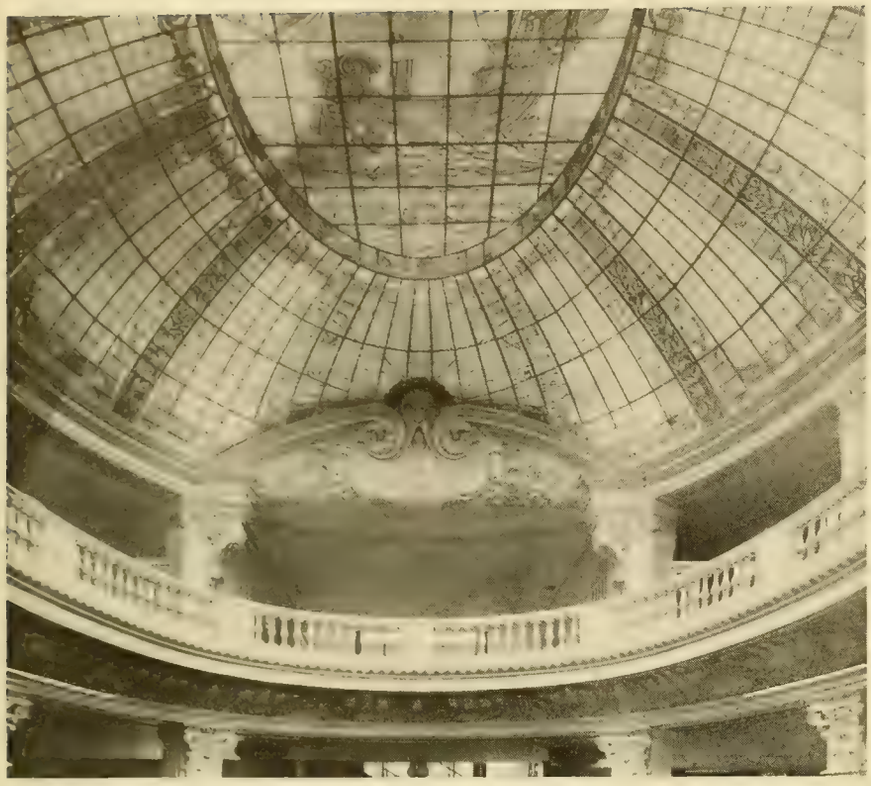
By Frank H. Doyle

In the center of the new building occupied by the "City of Paris" dry goods store here in San Francisco, is a central court extending from the ground floor to the roof, a distance of about one hundred and twenty-five feet. The width, or diameter, of the oval formed is only a little over twenty-five feet at the widest part. It does not require a great knowledge of photographic technique in order to realize the difficulty involved in securing a satisfactory picture of the subject; one in which the floor below and the dome above would both be shown. The picture herewith shows half of the dome and more than half of the floor space. The architect, after being assured by several photographers that his requirements were impossible of fulfillment, engaged an artist to draw a picture of the court, showing the dome. Some interior work which I had done for another architect, meeting his notice, I was asked to give the matter a trial.

I must confess that I did not go at it, after examining the subject and noting what was wanted, with a great deal of confidence. However, I determined to make a trial. A camera was carried from floor to floor, and the obtainable images, with various lenses, studied over, in order to see what plan would be most practical. Then the ground glass was marked to show the position of the three pillars and one at the left which was trimmed off in the completed result. It was decided that the minimum amount of distortion would, of course, result with the camera placed on the third or middle floor between the dome and ground floor.

I have an 8x10 camera that is equipped with a generous amount of swing to the back. I provided myself with several lens boards made out of cigar box wood, fitted with holes to accommodate two of my own lenses and several which I borrowed from a friendly dealer. The openings cut for these lenses were somewhat below the center of the front boards in order that I might, by turning either one side or the other upward, secure the equivalent of additional rise and fall of the front. These several lenses are listed in the catalogues as having focal lengths of from six inches to eight and one-eighth, but it would be misleading to quote these figures, as I found one of them to give exactly the same sized image, or rather the same amount of space between two points on two of the pillars as did another that was listed as having a different focal length. In reality, I used only three of the several lenses which I took along.

The camera was set up at a point directly opposite to the white cross shown near the center of the print from the second negative; which negative, by the way, was made first. Before inserting the plate holder and making the exposure, the ground glass was carefully marked to show the outline of the three pillars and one at the left which just came on the plate, but was afterwards trimmed off. This was done by using a sheet of tissue



THE NEGATIVE SHOWING THE DOME.

SHOWING HOW MIDDLE NEGATIVE WAS BLOCKED OUT TO MEET LOWER ONE.

paper fastened to the focusing screen, on the outside, with bits of gummed paper, where it could be easily penciled upon, unrolling it and re-gumming as succeeding parts were focused. The upper floor was then given attention. Another lens of slightly longer focus was inserted, this time with the lens above the center of the lens-board, the camera pointed upward as far as possible, and the back brought to the perpendicular. Do my best, the pillars could not be made to correspond exactly. However, I found that, by swinging the camera a little to the right, I could bring the first and second to correct spacing, the one to the left a little out, and the one which was to be trimmed off, still more out of position. So the second negative was made. The third negative, that showing the ground floor, was made in the same way, except that the camera was pointed downward, a third lens used, this time below the center of the make-shift front board; and, of course, the camera back again brought perfectly perpendicular by swinging in the opposite direction. Here the difficulty did not seem so great, possibly because the lens used may have better suited the requiremnts as to focal length. This was fortunate, because there was not so favorable an opportunity of joining the two images as appeared in the case of the join between

the first and second, which is made just below the balcony of the fourth floor. A white line at the left side of the first print showing the joining point.

The three negatives secured, the prints were made, and a proof shown, after trimming and pasting together the portions of the three that were needed. This so pleased the customer that a good order was secured, enough to justify the production of a new negative. With opaque, the undesired portion of each negative was blocked out, and a print of the whole made on solio paper in the same way that cloud negatives are combined with foreground in a landscape picture. This produced a negative from which the order was filled to the great satisfaction of both the customer and myself. Indeed, so well was he pleased with the result that, in the recent exhibition held by the Architects' Club, a bromide enlargement from the negative was shown in preference to the drawing which had been made at no small cost.

THE FINISHED PICTURE, AS DELIVERED.

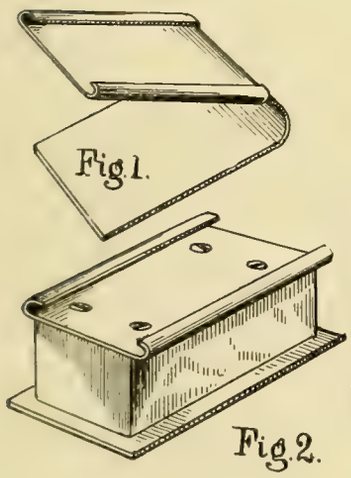
I could, of course, give exact measurements of the court, even measure and record the exact focal lengths of the three lenses used, but the information would have no real value except as the reader might be called upon to photograph an identical subject; something hardly possible. Every such case would demand its own treatment.

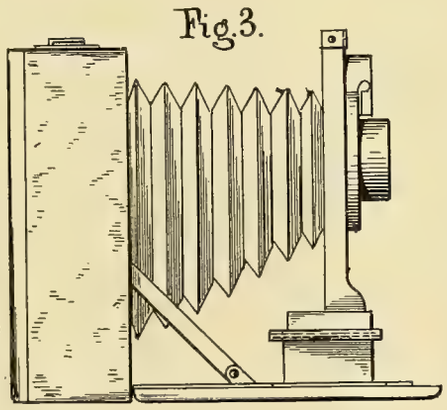
A Rising Front Utility

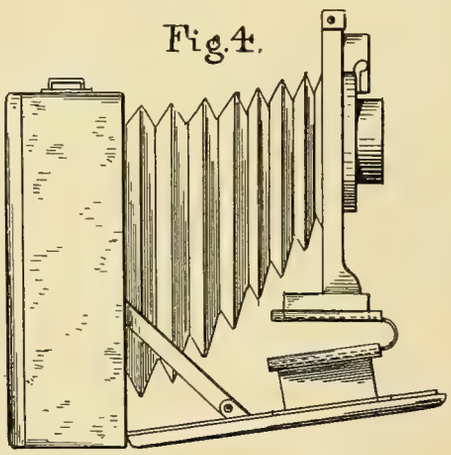
By John O. Wennermark

It often happens in my own work, and I suppose in that of others, that a tall building is encountered, of such a height and position, that even the combined use of rising front and swing back will not bring its image upon the ground glass in a satisfactory manner. There will still be too much foreground and not enough sky. Thinking the matter over, I devised an adapter that would allow me to raise the front still higher than was possible with the camera equipment, and one that gave me the added facility of an opportunity of keeping the lens board parallel with the plate when using the swing back.

I secured a piece of hard-pressed brass about five inches square and cut a piece about two inches long and just the width of the slide in the camera bed. Another piece was cut the same length, but half an inch wider, and the edges bent up, as shown at top of Fig. 2. These were screwed to







a piece of wood of the required size, in my own case, about an inch thick. This grasps the slide that is attached to the lower part of the camera front. It is shown in position in Fig. 3, and hardly needs explanation. It is easily placed in position, and its utility, providing one has a lens that will cut a little larger plate than is being used, is apparent.

To get sharpness without the necessity of stopping the lens down so far, when using the swing back, an additional piece is employed. This is made by cutting a piece of the brass about five inches long, two inches of its length being the same as the piece shown at top of Fig. 2, and the remainder a tongue of the same width as the bottom of Fig. 2; this last part being bent under as shown in Fig. 1. It is shown in connection with the other device, in Fig. 4. By bending this piece more or less after it is in position, the image can be sharpened up on the focusing screen in a way that will be found most satisfactory.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, FEBRUARY, 1910. No. 2

Send In That Ballot, Please

Our readers, we trust, will show their appreciation of our advertising contest by looking up the ballot in the advertising pages in the front of this issue, filling it out, and sending it to us, together with their letter, at an early date. Aside from the fact that the prize is well worth a much greater effort, the information which our advertisers will gain from the expression of opinion as indicated by the result of the balloting will result in an added value being given to our advertising pages. It has always been our contention that the advertising pages of a photographic magazine could be made so very interesting to the readers that the matter on the reading pages would at least be compelled to rank quite highly in order to hold the stronger position. If our advertisers can be shown just what appeals most forcibly to the most of our readers, there is every reason to believe that they will make the pages carrying their announcements much more interesting. Please get your ballot and letter into our hands at once. You will find the task an enjoyable one, and one far from difficult. Any reader can compete. And, should we decide to publish the letter whose merit decides the contest, the writer will be given an opportunity of re-writing it at his leisure, should he so desire.

Our Prize Articles

Never before in the history of the magazine have we received so many letters, complimenting us on articles in our pages, as we have been favored with since the starting of the professional series for which we are awarding a Wold Air Brush each month. We could really award several each month, if our space permitted the running of more than one article along the same lines. Mr. Wold writes, he is very much pleased with the articles so far published; and that he is prepared to give the successful ones the very best air brush that was ever produced, as he has recently made still another improvement that makes the new Wold Air Brush one that cannot be beat for simplicity and good work.

A Printer's Error

All cameras look alike to a printer. When the particular disciple of Gutenberg who looks after the destiny of our advertisers came to make up the page containing the advertisement of the Hall Camera Company, two months ago, his eagle eye detected a few letters missing. There was an

"R" and the word "LEX" remaining between the two words "MIRROR" and "CAMERA"; so, bringing his wonderful, deductive faculties into play, what could be more simple than to add a "G" and an "A," and make "GRAFLEX" out of the word, rather than "REFLEX," as it should have been. Our attention was first called to the matter by a wire from the Hall Camera Company, but too late to prevent a repetition of the error in the last, or January issue. Our apologies to both the Eastman Kodak Company, to whom the name "Graflex" belongs, and the Hall Camera Company, who are entirely innocent of any desire to give their camera another name, much less appropriate a name belonging to another firm.

Mr. Finley To Lecture Here

William L. Finley, author of "American Birds," lecturer and field agent of the National Association of Audubon Societies, and President of the Oregon Audubon Society, will lecture before the California Camera Club upon the occasion of their regular monthly lecture at Christian Science Hall, on the evening of February eighteen. At the early date at which this part of the magazine goes to press, it is not known just what arrangements will be made, but it is understood that the lecture will be so conducted that the general public can secure admission, possibly by the purchase of tickets of the members or at the dealers. The article from Mr. Finley's pen which appeared in our last issue gives but a small indication of the amount of work and study which Messrs. Finley and Bohlman have devoted to the subject during a long period of years. Their work has met with the approval of those high in office; in fact, quoting from a newspaper clipping:

> "It was through the efforts of Mr. Finley and his associate, Mr. Bohlman, that President Roosevelt, in August, 1908, set aside the two largest and most important wild bird reservations in the United Sates for the protection and preservation of wild fowl. These are Klamath Lake and Malheur Lake Reservations, lying in Northern California and Southern Oregon. Mr. Roosevelt was greatly interested in the wild bird photographs taken by these two naturalists. One of the photographs taken at the sea shore, of a gull over the waves, he said was the best thing he had ever seen in wild bird photography. Because of his wide experience in the field with the camera, Mr. Finley was asked to consult with Kermit Roosevelt, and give him suggestions as to field work and equipment, before the President and his son left for Africa."

H. A. Cudding In Chicago

A recent visitor from Chicago had been instructed to convey to us the best wishes of our old friend, H. A. Cudding, so well and favorably known as former manager of the local branch of the Eastman Kodak Company. While here, Mr. Cudding endeared himself to a host of friends, both in the trade and elsewhere, and these good friends will be glad to learn that he is doing well in an important and lucrative position as Chicago representative of the Spencer Kellogg Company, of Buffalo and Minneapolis, one of the largest linseed oil factors in this country. The best wishes of his many friends here on the Pacific Coast, including our own, are hereby tendered.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

THE RESOLVING POWER OF PHOTOGRAPHIC PLATES.

One of the most important and interesting of recent photographic investigations is a paper by Dr. Kenneth Mees, communicated to the Royal Society of London. The question which he set out to decide was: What is the smallest distance separating two lines of light that can be so recognized when photographed and developed on a dry plate? What are the causes limiting or affecting such records? The question has great scientific importance, especially in astronomy, where stars, not recognized by the telescope, are solely known as to size and form by the impression they make on a photographic plate. Some of these celestial images, which now appear as single points of light, may well be clusters, if their component parts are separated by distances smaller than the plate can register. On theoretical grounds it had been stated by Wadsworth that lines, separated by four times the diameter of the silver bromide particles composing the plate, will be resolved. Dr. Mees' work (for the details of his experiments see "British Journal of Photography No. 2590) demonstrates that the actual resolving is far short of Wadsworth's theoretical deduction. The grain of the plates used varied from about half a micron, one-thousandth of a millimeter, to a micron in size, and the plates should therefore have resolved lines from two to four one-thousandths of a millimeter apart. The actual resolving power was about one-tenth of the theoretical, namely, for ordinary fine grained plates, eighteen thousandths; for coarse grain, thirty-thousandths of a millimeter. The failure to resolve is due to two causes. First, irridation due to reflection, most evident in coarse grained emulsions; and, secondly, irridation the result of diffraction; this increases with the smallness of the grain and therefore checks improvement by means of making the emulsion finer. As, however, diffraction is less with long waves of light, and is increased by thickness of film, it follows that a very thinly coated plate of fine grain sensitized for red illuminated by red light, will give the best resolution. In this way Dr. Mees resolved lines separated by eight-thousandths of a millimeter.

THE GUM-PLATINUM PROCESS.

Under this heading, Malcolm Arbuthnot, in "The Amateur Photographer and Photographic News," writes as follows:

Although the idea of superimposing an image in pigment on a platinum base was suggested many years ago, yet the process seems to be very little known and, so far as I am aware, used by few.

It is, however, probably the finest method of printing a pictorial photograph, containing as it does the best qualities of perhaps the two most valuable processes ever offered by the scientist to the artist—namely, platinum and gum-bichromate.

Possibly some may be prompted to ask why one or other of these printing mediums is not sufficient for our needs by itself without combination; but when setting out to give the best possible rendering of a subject, it behooves us to use every means at our disposal.

The platinum process, I believe, stands pre-eminent for the rendering of half-tones and subjects where a general delicacy is the dominating feature, whereas gum-bichromate is chiefly remarkable for the wonderful depth and lusciousness it imparts to the darker portions of a picture.

Theoretically, we should therefore strive to obtain a very thin platinum print, in which every gradation in the lighter tones is present, the shadows being produced by coating the finished platinum print with a mixture of gum arabic, potassium bichromate, and pigment.

However, in practice it will be found that we can depart very considerably from the theory, and in fact even work in the opposite direction, provided the negative be suitable and the effect desirable.

There is no doubt that for certain subjects a plain platinum print from a good negative will give practically all that could be wished for, and it is equally certain that for others gum-bichromate from even a bad negative will do likewise; but, as every adherent of either process will admit, there is, apart from the limitation of subject, a considerable risk of failure, due to reasons over which we have frequently no control.

For instance, platinum prints have a knack of turning out flat and mealy, or the exposure may be so slightly incorrect as to spoil the effect aimed at.

The number of queer things which may happen to gum prints, when printing for a long range of tone, is almost past belief, so much so that many workers have given up the process in despair.

By combining the two processes we are not only enabled to render practically all subjects, but, except from accident or gross carelessness, we need never waste a print. The results will not only have a quality which is unique, but will bear the impress of personal control from start to finish.

In describing the working details, it is perhaps unnecessary to remark that it is most essential to have clearly defined the effect which is being aimed at; in fact, as with any other finished picture, this must always be in the mind's eye. Consequently we shall commence by making our negative, so far as possible, according to whether we desire to make most use of the platinum or gum element.

The gum arabic solution is that in general use, namely, two ounces of best gum arabic in five ounces water, to which is added a little formaldehyde or carbolic as a preservative. This should be strained.

The sensitiser is a saturated solution of potassium, or, better still, ammonium bichromate.

If a number of printings are contemplated which would involve a great amount of gloss in the shadows, it is advisable to dissolve the gum in a four per cent solution of arrowroot.

This, in addition to giving a matt surface, forms a much tougher film, in which, consequently, a larger amount of pigment can be incorporated without danger of its breaking away in patches during development.

Color of the Gum Printing.

Those taking up this process for the first time will probably think it essential to match the pigment with the tone of the platinum print, but this is not really necessary. I have produced many prints in a warm sepia color which were commenced with a thin black platinum print as a base.

Some delightful effects can be obtained by printing in two tones, or by a judicious combination of various pigments and platinum developing baths, such as the formula devised by Mr. Inston.

As a slight loss of quality in the platinum print is of no consequence when used as a base for gum printing, it will often be advantageous to develop by the glycerine method, which not only affords a further opportunity for effecting alterations, but also reduces the risk of spoiling paper from errors of exposure.

In the case of portraits and figure studies, some interesting effects can be obtained by developing only a part of the print (such as the face in a portrait), holding back the rest with glycerine.

This undeveloped portion is then replaced by a gum image, which can be worked upon with brushes, etc., thus imparting a delightfully spontaneous and sketchy character, which for some subjects is very pleasing.

Making the Platinum Print and Registering.

In commencing to make a gum-platinum print it will first be necessary to devise some method of replacing the print on the negative so as to ensure exact register being obtained. This can be accomplished in several ways, and the use of a drawing-board, instead of a printing frame is one of the best, besides having the further advantage of allowing the whole of the print to be examined during exposure.

A piece of stout flannel must be attached to the board, and upon this is laid the platinum paper, sensitive side uppermost. When cutting up the paper, a margin of about an inch larger than the negative must be provided.

Pin the paper to the board by the four corners, and in the center place the negative.

We shall now require some ordinary pins of a fairly stout gauge, and two of

these must be driven through the paper into the board, so that they press firmly against the glass on all sides.

A few drawing pins can be used to ensure contact if desired. This is only necessary if the negative is not a very large one. If a large glass negative is used, its weight is generally sufficient to keep it in good contact with the paper. Printing should be conducted with the board as nearly horizontal as possible. A good top light or printing in the open air is advisable.

When it is necessary to examine the print, the negative is removed altogether, and if the pins have been accurately fixed, it can be replaced in exact register.

The platinum print having been finished and coated with the gum mixture, must again be placed upon the felt-covered board, and it will only be necessary to reinsert the pins into the same holes, to ensure the negative coming again into register.

For small pictures, an ordinary printing frame will suffice, but in this case the subsequent printings must be adjusted by hand, and therefore it will be found advisable to provide registration marks on the negative.

These can be made either by scratching away a portion of the film at the edge of the plate, or by painting an opaque patch which will have corresponding marks on the print. When the print has been thoroughly dried it will be ready for coating with the gum mixture, which should be composed of equal parts of the gum and bichromate solutions previously mentioned.

The Pigment and Exposure.

The pigment will be the next consideration, and this can be used either in powder or tube form, my preference being for tubes; lampblack being very useful as a base, which can easily be modified by the addition of other colors.

The amount to be used depends entirely on the portion of the negative we wish to print. Should it be desired to deposit a pigmented image on the lighter tones a very little color will suffice, whereas for building up the shadows a much larger quantity may be used.

It must not be forgotten, however, that the grain of a gum image depends to a great extent on the amount of pigment in the coating; any excess is liable to give a very coarse grain indeed, so that when printing a shadow coating, the exposure must be carefully watched in order that the thick film does not get deposited on the lighter tones, which would at once show an unpleasant granularity.

The correct amount of pigment can only be satisfactorily determined by experience, but, as a rough guide, I may suggest that for a shadow coating three quarters of an inch of Reeves' lampblack will be about right for half an ounce of gum and an equal quantity of bichromate.

For the half tones, say half an inch, whilst a quarter of an inch will be sufficient for the high lights.

When printing for the shadows it is advisable to use a slightly higher proportion of gum than bichromate, and vice versa for the lights.

An actinometer of some kind will be required for judging the exposure; that supplied by the Leto Co. for their pigment paper is both satisfactory and inexpensive.

Those who are used to gum printing will have no difficulty in estimating the exposure, but for the benefit of beginners I would mention that a coating in the proportions given for the half tones would be about the same rapidity as P.O.P.

Development is effected by immersing the print face downwards in cold water for about fifteen minutes, then complete by means of a brush or spray. The tones of the print will be perfectly under control.

A Novel Use of the Alum Bath.

Should it be desired to entirely remove a correctly exposed coating, it is only necessary to soak the print in cold water for about an hour, followed by gentle friction with a soft brush. But if coating has been over-exposed, then we must have recourse to an alum bath, which must be about 5 per cent or stronger.

The print should be immersed in this face downward for two or three hours, when it will be found to have become quite soluble.

This may sound somewhat strange when considering the hardening properties of alum, but it seems that a solution of alum first softens a gum image (and some other colloids), and only exerts its hardening influence when the print becomes dry.

For this reason care must be taken before removing the print from the alum bath to see that pigment remains on the paper only where it is required.

AN AMERICAN DEMONSTRATION OF THE URBAN-SMITH PROCESS OF ANIMATED COLOR PHOTOGRAPHY.

The evening of December eleventh a demonstration was given in the concert hall of Madison Square Garden, New York city, of a new process of moving pictures in natural colors, which has been perfected during the last two years by G. Albert Smith of London, England. A large audience was entertained for two hours with a considerable number of kinematograph views in natural colors. These pictures, besides being excellent reproductions of the original subjects both as to shade and color, were not so tiring to the eyes as the ordinary moving pictures, due probably to two reasons, viz., double the number of pictures thrown upon the screen, thirty-two in a second, and the toning down of the light by the color screens.

The subjects shown varied widely, extending from flowers to animals and birds, harvest scenes, military reviews, waterfalls and surf, etc. In all of these pictures the coloring was excellent and altogether true to nature. Such colored pictures have been shown for some time in several large music halls abroad, and they will soon be produced, no doubt, in similar places in this country.—"Scientific American."

This process has already been fully described in these columns.

PRESERVATION OF SULPHITE SOLUTION.

The properties and changes of sodium sulphite have been much under discussion of late and some of the findings have been recorded in these columns. One discovery, discussed in the "British Journal of Photography" No. 2589, is of great practical value. It appears from experiments of Dr. Wigner that the addition of small quantities of hydroquinone to a solution of sodium sulphite effectually prevents its oxidation. Thus a ten per cent solution of sulphite to which a one-thousandth part of hydroquinone is added will not decompose. This would be about seven grains to the pint, or a little less than one-half a grain an ounce. As the sulphite is usually used in about five per cent to make a developer, the presence of less than a quarter of a grain per ounce of hydroquinone would not overpower the influence of the developer used should it not be hydroquinone, and could at the most, but slightly reinforce it. The additional cost would be very slight, 1 ounce hydroquinone to six and one-half pounds sulphite, and would probably be less than the cost of the sulphite normally sacrificed to oxidation.

BLACKENING BRASS.

This process only gives a black finish, not a dead black surface. Still, it minimizes reflections, and also renders the outside camera fittings very inconspicuous. The first operation is to clean the brass very thoroughly with a smooth file or with fine emery or glass paper. Scraping with a knife is also effectual, and if carefully done gives a nice finish. When clean, the metal must not be touched by the fingers, but be held with a piece of wire or pliers. It is then made hot over a Bunsen burner or any smokeless flame, and when too hot to touch is immersed suddenly in a saturated solution of copper nitrate that has been made distinctly acid by the addition of nitric acid. This, of course, rapidly cools it, and when cold it is taken out of the solution and the superfluous liquid allowed to drain off. It is then heated again over the flame, when it rapidly turns to a bright green color. The heating is continued until this green changes to a very dead black, which appears in the form of a powder dusted over the surface. As a rule, it is desirable at this stage to repeat the process, and when for the second time the black stage is reached we can proceed to finish it off. This finishing consists simply of a vigorous brushing with an old toothbrush which has first been lightly rubbed on a cake of black lead. We soon arrive at a black, smooth finish, with only a very slight trace of polish. The article may be left like this, or we can, of course, apply a lacquer if desired, but for outside fittings we prefer to give no more polish than results from a brisk rubbing with a slightly oily rag. This finish will last a long time, and stand a great deal of wear, while it always looks well.—"British Journal of Photography."

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

MAKE SOME COPIES.

There isn't one amateur in a hundred that realizes how many good negatives he can acquire from time to time by copying the pictures in his own home or in the possession of his friends. And it is as easy as anything well can be for the worker with a little experience and the confidence that the experience gives. I was out at the home of an amateur the other evening and found him busy in a spare room that he has warmed up with a simple oil stove every afternoon ready for him during the evening. Being a spare room, the camera and copy support remain in position from one evening to another, avoiding the necessity of packing up; which latter, at most, would not be a great task. There is only one point in copying that is likely to cause any trouble to the novice, and that is the avoidance of grain. This granular effect is caused by the light being stronger from one direction than the other, making each tiny grain of the paper cast a shadow. This is easily avoided by making the exposure as does my friend, by means of magnesium ribbon. One-half the desired length is cut off, held by a pair of pliers, lighted at the lower end, and moved about at one side of the camera, and of course at the side of the copy, just far enough back so that none of the light strikes the front combination of the lens. Another piece of equal length is then burned on the other side. It is surprising how little of the ribbon is required and how little it costs. This user finds it cheaper than gas for exposing his gas-light paper. He, of course, takes care to see that the picture being copied is straight with the camera front and its center directly opposite the center of the lens. This is not difficult, because a box is used as an easel for the picture being copied, and the camera is used on another smaller box to raise it to the desired height when necessary; making it easy to see if all is square. A ruler or other straight-edge is laid diagonally across the picture from corner to corner in both directions, and the intersection is noted as the center of the copy. The ground glass is marked with two pencil marks crossing at the center in the same way. By touching this point with a drop of water and removing the lens from the camera, it is easy to sight through from the transparent spot on the ground glass and see if the previously noted center of the copy is in line. This at once establishes the height of the camera without the trouble of moving it up and down trying to get the image inside the confines of the plate.

But it is only until one starts to do this kind of work that he will understand how much of value and enjoyment can be got out of it. A funny little cartoon copied out of a paper, an artistic bit of wood engraving from an old magazine, a picture of a family relation that a number of friends are pleased to have in the form of copies, an old recipe for a favorite dish that Aunt Jane had written out in her characteristic hand years ago; in fact, the list would require a page just to enumerate the subjects which my friend has made both permanent and easily available by borrowing from friends and making a negative therefrom.

DO NOT BE CARELESS.

"Edwin J. T. Webb, a well-known solicitor of Portsmouth, New Hampshire, whose favorite hobby was amateur photography, had fitted up a dark room in the cellar of his house; and, going down there to develop some plates, opened a bottle of beer and poured out a glass to drink while at work. Becoming absorbed in his task, he mistook the glass and put into it some cyanide of potassium. For a time he went on working, ignorant of his mistake. Then he remembered the beer and drank some of it. Instantly he realized the terrible error he had made, and, while

life was still his, snatched up a scrap of photographic paper and on it scribbled a message to his wife. It was read at the inquest and ran as follows: 'In semi-darkness have made awful mistake. Must have poured cyanide into ale. Only a few seconds to live. Cannot call. God help you, my pet. Brain reels. Tell ——.'

"The writing towards the end of the message was almost undecipherable. After writing this, Mr. Webb apparently tried to crawl upstairs, but he fell dead at the foot, where later his wife found him."

The above is a piece of news that appeared in a large number of city dailies on December nineteenth. It is a caution that many of our readers will do well to heed. There is too little realization, as a rule, of the danger involved by carelessness in the use of some few photographic chemicals that are of a highly poisonous nature. Of course, the number of dangerous chemicals is not large; most of those used being entirely harmless, but care is all the more important on that account.

TONING PLATINUMS.

A reader in Texas wants to know how to get tones just off the black on his platinum prints. If he will dissolve two grains of copper chloride to every ounce of a saturated solution of oxalate of potash he will have a cold developer that will give warm black tones. Two or three grains of mercuric bichloride to each ounce of the saturated solution of oxalate also produces warm blacks. Purple browns can be secured on the sepia paper by developing with the following:

Water	20 ounces
Oxalate of potash	2 ounces
Phosphate of potassium	2 ounces
Citric acid	20 grains

This should be used hot. Adding three grains to the ounce of mercuric bichloride, the tones will be changed to a brown sepia.

Five ounces of citric acid and one ounce of yellow mercuric oxide, dissolved in twenty ounces of water, warmed, well shaken, and then filtered, makes a solution that, according to the amount added, gives warm black to red brown tones with the normal cold developer.

Another plan that may appeal to our reader is that of mellowing the prints slightly to imitate the appearance of old engravings. If the prints are immersed in a one per cent solution of bichromate of potassium, then lightly rinsed and dried, the paper will be given a slight yellowish brown tint that is quite pleasing. Strong tea or coffee may be used for the same purpose. Use either freshly made. If it is desired to keep the infusion of tea or coffee for future use, add two or three grains per ounce of salicylic acid.

TO REMOVE RETOUCHING.

A reader in Illinois sent several negatives to a retoucher, only to have the likeness of the sitters entirely destroyed. He wishes to remove the medium carrying the faulty retouching. It is almost impossible to advise without knowing the composition of the medium. I would suggest that he first try rubbing with a tuft of cotton dipped in benzole. Even if effective, some little time and the use of several clean pieces of benzole moistened cotton will be necessary. Then follow with ether used in the same manner; and, lastly, some good alcohol. Placing the negative in water and observing if the gelatine film swells even all over will show whether all the medium or varnish has been removed. If some remains, dry the negative and try again. Have recourse to the soaking in water only after feeling quite sure that the medium has been removed quite completely, as the drying after soaking may result in drying marks if part of the film is still protected by the varnish.

SECURING A FINE GRAIN.

A Chicago correspondent wants to know how to secure the finest possible grain in his negatives; he wants to make some for a special purpose, as grainless as possible. A slow plate generally has a finer grain than a fast one, and a strong alkali such as caustic potash or soda should be avoided in making up the developer. Forcing in development should also be avoided. Adding a solvent of silver bromide to the developer will cause finer grain, but it also acts somewhat as a restrainer, necessitating slightly longer exposure. The ammonium chloride, about twenty grains to the ounce of developer, is quite effective. This plan is followed by a local photomicrographer, and samples of his work are of exceptionally fine grain as viewed under the microscope.

International Photographic Association

THE LANTERN SLIDE DIVISION.

One of our old members, George E. Moulthrope, of Bristol, Connecticut, a commercial photographer who makes a specialty of fine lantern slide work, has kindly consented to act as Director of our new Lantern Slide Division. With him, as Secretary, will be associated Edward F. Cowles of the same city, another enthusiastic worker in the same field. You will find their names listed with the other officers of our Association this month. We would ask all our members, as well as readers who are not members but who may be interested in lantern slide work, to send their names and addresses to Mr. Cowles. If you know of any photographers interested in the work, send their names also. We particularly want the names of those who possess a lantern and who would be interested in the securing of a set for private or semi-public display from time to time as the routing of the sets may make convenient.

Under the management of Messrs. Moulthrope and Cowles we hope to have the Lantern Slide Division assume the same popularity that is enjoyed by the Stereoscopic Division, which latter has a number of fine sets of stereoscopic pictures in circulation at all times. The Lantern Slide Division will encourage the exchange of lantern slides between members, encourage the taking up of lantern slide work by the members who do not at present realize the beauty of this form of photography, and it will attend to the getting together of sets of slides made up of members' work, these sets to be circulated amongst members contributing thereto as such members may desire, and to be routed to camera clubs whose members desire to share in the benefits.

To the end that a good start may be made, the officers of the new division are desirous of hearing from as many lantern slide workers as possible at the earliest moment. Suggestions as to the plan and scope of the work will be gladly received. The new division, while nominally a part of the International Photographic Association, will be conducted by its two officers, as they and the members interested may see fit. It will have its own rules and be hampered in no way by its connection with the main body, so far as the conducting of its affairs may be concerned. The members of the Division will, however, be governed by the same exchange rules and the same restrictions as to membership, conditional on their being subscribers to "Camera Craft," the official organ of the I. P. A.

Mr. Moulthrope advises that he has plenty of cover glasses and binding tape, that he believes the slides intended for the circulating sets should be mounted in a uniform manner with a printed slip on the mat showing that they are the property of the Lantern Slide Division of the I P. A., the slide and set number, with the title and maker's name and number. The members desiring to contribute slides should therefore send to him simply the unmounted plates. They should, however, see that such unmounted slides are particularly well washed and, if desired, accompanied by a rough cut-out showing the size and form of mat opening thought best by the maker of the slide. The slides should be well packed. If wound around with strips of paper and then enclosed in a cigar box, cut down to a rough fit, they will go safely. Mr. Moulthrope has sent hundreds through the mails in that way without a single loss. Full assurance is given that the mounting will be done in the best possible manner. Also, do not neglect to send such information as will be of value in describing the slide when exhibiting it. From this data will be made up brief descriptive talks to accompany the sets. A bare title is hardly sufficient for the full enjoyment of the slides. And send along some slides at once. The new division

can do nothing without the co-operation of the members interested in the work. There is no reason why we cannot make this Division an important factor in the popularization of lantern slide work among the photographers of this country.

Mr. Cowles writes that he wishes to make up a card index file of as many lantern slide workers as possible. These cards will bear information as to the desires of each individual listed. One may wish to contribute a few slides and be advised as to when a set can be routed to him. Another may wish to exchange with other members as well. A third may wish to exchange only certain subjects. Still another may desire to contribute a few slides and avail himself of the loan of a set only at some future date, or not at all, as he may elect. Mr. Cowles should be advised whether you have a lantern or not, and should know what class of subjects you make. He also would like to have a sample of your work. With this information at hand, matters will progress quite rapidly. If a new member should desire the names of those making a certain class of work, he could be favored at once. If a set is to be routed, the cards will give the desired information as to who desires an opportunity of receiving it. If a new set is wanted and slides are not available, members willing to contribute thereto can be written. Will you kindly write the secretary, Edward F. Cowles, 11 Oak Street, Bristol, Connecticut, giving him all the information and suggestions you can?

With this I will turn the Division over to its officers and trust you will give them your hearty support. They are, in taking up the work, assuming labor and responsibility for which they ask only your kind co-operation. Will you show your appreciation, please?

Most cordially,
FAYETTE J. CLUTE,
Secretary I. P. A.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4950 Washington Ave., Chicago, Ill.

Hy. C. Ferris, Director Post Card Division, 837 Acoma St., Denver, Colo.

George E. Moulthrope, Director Lantern Slide Division, Bristol, Conn.

Edward F. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

MEXICO.

Vice-President—Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

CANADA.

Album Director—C. H. Foster, Kerwood, Ontario, Canada.

Secretary—J. A. Waddell, Kerwood, Ontario, Canada.

NEW MEMBERS.

2223—E. M. Anderson, Alvarado, Cal.
4x5 and 5x7, on all kinds of paper, mostly landscapes, for views. Class 1.

2224—W. M. Sackstader, care Latta Optical Co., Louisville, Ky.
Class 3.

2225—Miss Nellie Robins, care Southern Optical Co., Louisville, Ky.
Class 3.

2226—Granville Shaw, Box 496, Louisville, Ky.
Class 3.

2227—Wilbur F. Smith, 2206 Monroe St., Chicago, Ills.
Post cards only. Class 1.

2228—Arthur Moore, 174 Fort St., Winnipeg, Man., Can.
Class 2.

2229—Clare W. Faulkner, Box 647, Dawson, Y. T., Can.
4x5, on developing paper, of scenes, buildings, and portraits, for work specified in letter. Class 2.

2230—W. J. Henry, Box 72, Adamsburg, Pa.
Post card, 4x5 and 5x7, on developing paper, of buildings, scenery, and the like, for post cards and prints of any subject. Class 1.

2231—George Stokes, Carlton Ave., East Islip, N. Y.
Class 3.

2232—J. L. Park, 7939 Susquehanna St., Pittsburg, Pa.
Stereo size, printing-out and developing paper, of a wide range of city and country subjects. Exchanges stereos only. Class 1.

2233—George M. Brouen, 62 Orchard St., New Haven, Conn.
4x5 to 6x8; all kinds paper; artistic views, babies, animals, good artistic subjects, South African natives, in print or post cards, for anything that is artistic, beautiful, or interesting. Class 1.

2234—Peter T. Lassu, Spring Lake, Alberta, Can.
4¼x6½ and smaller, on developing paper; views and the like, for anything of interest. Prefers post cards. Class 1.

2235—O. P. Bracht, Box 43, Chaffee, N. D.
4x5 and 5x7, developing paper; farm views and Dakota scenery, for general views and post cards. Class 1.

2236—J. B. Corrie, 507 W. Mendenhall St., Bozeman, Mont.
Post cards, stereos, to 8x10, developing paper; miscellaneous subjects, for stereoscopic pictures. Class 1.

2237—John A. Glassey, 109 Front St., Exeter, N. H.
4x5 and 5x7, developing paper; landscapes, marines, and genre. Class 1.

2238—Elmo Cook, Ocoee, Tenn.
5x7, printing-out paper, for post cards and platinum prints. Class 2.

2239—R. Titsworth, Fort Bliss, Tex.
4x5, 5x7, and 6½x8½, developing paper; landscape, military, and Mexican subjects, for general subjects. Class 2.

2240—John Dove, 3136 Custer St., Philadelphia, Pa.
5x7 and smaller, and enlargements, all papers; landscape and genre. Class 2.

2241—Dr. J. C. Elsom, 1614 Jefferson St., Madison, Wis.
3¼x4½, 4x5, and 5x7; bromide, developing paper, and lantern slides; athletics, winter sports, snow scenes, university activities, and general; for similar scenes, lantern slides. Class 1.

2242—Norton L. Avery, Box 515, Lowell, Mich.
3¼x4¼, developing and Aristo paper; general views, for same, including post cards. Class 2.

2243—Henry A. Hoyt, 827 Spencer Ave., Santa Rosa, Cal.
3¼x5½ and 5x7, developing paper; general subjects, for goods views, public and historical buildings, views, and such work, same size. Class 1.

2244—Wilbur Mondabaugh, R. F. D. No. 1, Hancock, Minn.
5x7 and smaller, developing paper; speed work, home portraiture, for child studies and views. Class 1.

2245—Olin B. Crain, Cortland, N. Y.
Post cards and 5x7, developing paper; local views, for animals and landscapes. Class 1.

2246X—L. E. Miller, 357 Main St., Norwich, Conn.
Post cards only. Class 1.

2247—Ira A. Moore, Fonda, Iowa.
Post cards, Graflex, athletic events. Class 2.

2248—Miss Leona B. Stont, Claysville, Pa.
4x5 to 8x10, developing paper, studio work, for studio work. Class 2.

2249—Charles Bargler, Box 198, Leadville, Colo.
3¼x5½, developing paper; views, for same. Class 1.

2250—Miss Mary Glennie, 24 Church St., Charleston, S. C.
Post cards only. Class 2.

2251—E. S. Harvey, 206 S. Lebanon St., Lebanon, Ind.
3¼x4¼ to 8x10, developing paper; landscape and general. Class 2.

2252—C. S. Gilbert, 1414 N. 2d St., St. Joseph, Mo.
4x5, postcards, and enlargements; developing paper; for views and lantern slides. Class 1.

2253—Mrs. William E. Knowles, Fridley, Mont.
3¼x5½, developing paper; ranch and mountain views, for general views and post cards. Class 2.

2254—Charles F. Rice, Box 517, Mamaroneck, N. Y.
3¼x4¼ to 5x7, developing paper; landscapes, speed work, for same, and prefer landscapes with striking cloud effects. Class 2.

2255—Fred E. Crum, R. F. D. No. 1, Monsey, N. Y.
Post cards only. Class 2.

2256—Mrs. T. J. Scott, R. F. D. No. 1, Underwood, Wash.
Class 3.

2257—Olof Lundin, Box 16, R. F. D. No. 1, Springfield, S. D.
Class 3.

2258—A. E. Batchelder, 1114 Illinois St., Huron, S. D.
2¼x3¼, developing paper, various subjects. Class 2.

2259—Virgil C. Borror, Wenatchee, Wash.
5x7, interesting subjects, for same. Class 2.

2260—Arthur Drake, Box 375, Sibley, Iowa.
Photographic post cards only. Class 1.

2261—Richard P. Beale, Box 85, Edmonds, Wash.
3¼x5½, developing paper, general views, for same. Class 1.

2262—Miss S. Adelaide Beaty, 1411 Adams St., Olympia, Wash.
Class 3.

2263—Thomas Martin, 50 Fowler St., Grove Hall Sta., Dorchester, Mass.
4x5 to 8x10, developing and blue print paper; miscellaneous subjects. Class 1.

2264—Ernest N. Corson, R. F. D. No. 2, East Corinth, Maine.
2¼x4¼, 3¼x5½, and 5x7; developing paper and cards; buildings and farm scenes, for prints and cards of the smaller sizes. Class 1.

2265—Clyde Jacoby, 111 Grand St., Marshall, Mich.
3¼x5½, developing paper; general subjects, for post cards and prints of same size. Class 1.

2266—W. L. Huckabay, Sparta, La.
5x7, developing paper; personal photographs, for any subjects. Class 1.

2267—Fred W. McKay, Box 68, Brooksburg, Ind.
3¼x4¼, developing paper, landscape and general. Class 1.

2268—F. V. Roach, Box 158, Petrolia, Pa.
Post card size; views, portraits, oil country scenery, for general views and artistic portraits. Class 1.

2269—Carl Farnsworth, Litchfield, Neb.
3¼x5½ and 4¼x6½, developing paper; landscape, farm, railroad, and snow views. Desires to exchange mostly post cards. Class 1.

2270—Louis F. Bouchereau, 1668 Rocheblare St., New Orleans, La.
5x7 and 8x10, developing paper; street scenes, interiors, commercial work, for views and commercial work. Class 1.

2271—Sylvia A. Davis, 852 East 54th St., Los Angeles, Cal.
Class 3.

2272—O. F. Jordan, 1022 Sherman St., Evanston, Ill.
Lantern slides and post cards only. Class 2.

2273—Dr. R. A. Herring, Ellis Island, New York Harbor, N. Y.
Class 3.

2274—Elmer Towne, S. Dayton, N. Y.
Post cards only. Class 1.

2275—Miss Ethel L. Matlock, R. F. D. No. 2, Grand Junction, Colo.
Post cards only. Class 1.

2276—J. Frank Felter, Association Hall, Champaign, Ill.
3¼x5½, developing paper; college scenes and general view work. Class 2.

2277—W. H. Chapman, 1132 W. Broadway, Butte, Mont.
4x5, 5x7, and 6½x8½; developing paper; mountain scenery and marine views, for general scenery. Class 2.

2278—L. T. Neikirk, 1004 S. Mathews Ave., Urbana, Ill.
Post card and 5x7, developing paper, of landscapes, mountains, etc. Class 2.

2279—Jay Satterlee, 8 Riverview Place, Yonkers, N. Y.
Class 3.

2280—H. C. Smallfield, Box 35, Lynden, Wash.

2281—John Shira, Mount Bullion, Cal.
Post card and 5x7, developing paper, miscellaneous. Class 1.

2282—Jeppe Jepson, Box 2, Point Terrace, Ore.
4x5; various papers; anything of interest, for same and lantern slides and post cards.

2283—Oscar E. Scholen, Gen. Del., Port Townsend, Wash.
Class 3.

RENEWALS.

67—George R. Bosworth, R. F. D. No. 4, Montpelier, Vt.
Post cards, 5x7, and 8x10, of State House, historical, landscapes, and scenes of interest. Class 1 for good work only.

510—George D. Steck, 1327 W. 11th St., Cleveland, Ohio.
Class 3.

1248—J. C. Hawver, Box 214, Auburn, Cal.
Stereos and lantern slides. Class 2.

1250—W. K. Crisp, Hampton, Nova Scotia, Can.
Stereos and single pictures up to 8x10, developing paper, Nova Scotia scenery and miscellaneous.
Class 1 for wild animals, uncivilized life, tropical scenery, nudes, boys of foreign lands, and stereos.

1788—Bertha Hopkins, R. F. D. No. 1, Holly, Colo.
Class 3.

1798—H. O. Benham, Montgomery, Mich.
Up to 5x7, developing paper; anything interesting, for post cards. Class 1.

1815—C. Otto Schmidt, 1010 21st St., Manitowoc, Wis.
4x5, developing paper; anything interesting. Class 1.

1818X—Paul B. S. Brooks, Hopkinsville, Ky.
Post card and 5x7, developing paper, principally landscapes. Class 1.

1853—Ray Moore, 819 N. Poplar St., Ottawa, Kan.
Stereo and post card, printing-out and developing paper; miscellaneous subjects, for same. Class 2.

1863—H. H. Hapke, 203 Wahsatch Ave., Colorado Springs, Colo.
4x5, various papers; landscapes and types, for post cards and regular prints. Class 1.

1908X—Thomas E. Guerin, 3624 N. 6th St., Philadelphia, Pa.
Post cards and 4x5, general subjects. Class 1

2121X—Minnie Mendenhal, 126 N. Friends Ave., Whittier, Cal.
4x5 and smaller, developing paper; miscellaneous, for good post cards or regular prints. Class 1.

2137X—Guy A. Clumner, R. F. D. No. 1, Republic, Wash.
Post cards up to 5x7, developing paper; landscapes, mountain scenery, ranch and lumbering scenes, for landscapes and subjects of general interest. Would like to make foreign exchange. Class 1.

2140X—Cleo L. Bowerize, R. F. D. No. 2, Greenwich, Ohio.
Up to 8x10, various papers, miscellaneous subjects. Desire mainly post cards. Class 1.

2041X—Charles F. Holmes, 195 Green St., Cambridge, Mass.
Post cards only. Class 1.

2047X—George L. Waterbury, Box 93, Pine Knot, Ky.
Stereos and post cards only. Class 1.

2187—L. B. Benjamin, 127 W. 6th St., Los Angeles, Cal.
Post card and 5x7, developing paper, focal plane work, for like work. Class 1.

CHANGES OF ADDRESS.

1831—Frank Dillon, Gardnerville, Nev.
(Was Lock Box 13, Fort Klamath, Ore.)

1873—W. F. Miller, Barnhart Vale, B. C., Canada.
(Was Campbell Creek, B. C., Canada.)

1892X—William H. Congdon, 1263 1st St., San Diego, Cal.
(Was Giddings, S. D.)

2173—George M. Pease, 4810 Denison Ave., Cleveland, Ohio.
(Was 1447 W. 110th St., Cleveland, Ohio.)

2234—Peter T. Lassu, 716 Pacific Ave., Tacoma, Wash.
(Was Spring Lake, Alta, Canada.)

WITHDRAWALS.

1997X—Alice A. Wiltse, Redvers, Sask., Canada.
Is ill, but as soon as possible will make the exchanges already due.

2111—C. S. Lawrence, Echo Mountain, Cal.

Our Book Shelves

THE NEW AMERICAN ANNUAL.

Just as we go to press a copy of the 1910 "American Annual of Photography" comes to hand. The usual good standard is maintained, perhaps improved upon, which is praise enough to inspire the purchase of a copy by every person interested in photography. The illustrations are very fine, and the text of decided value. The paper-covered edition sells for seventy-five cents, the cloth bound edition for one dollar and twenty-five cents. Postage is seventeen and twenty-two cents respectively. George Murphy, Incorporated, 57 East Ninth Street, New York, N. Y., selling agents.

"GINGER TALKS."

Last month I told you about some little books for spare moments; some little books from the Sheldon University Press, of Libertyville, Illinois. I thought I would try another; this time, "Ginger Talks," because the title was attractive. I made a sad mistake. I just simply had to keep on reading until the bottom of the last page was reached. But I am going to read it over several times; if I was in the selling line I would commit it to memory, I think; so it is still a "spare moment's" book, despite the fact that it took more than the spare moments before it could be laid down the first time. By all means get a copy. If you are trying to sell anything, get two. It is an inspiration of which you cannot have too much. It costs two dollars, postpaid. It is worth twenty. Ask those Libertyville people about it if the two dollars look too big to send on our suggestion.

"DEUTSCHER CAMERA-ALMANACH, 1910."

This is the sixth issue of this excellent German annual. Herr Loescher, having passed away since the last volume was published, the present one is edited by Otto Ewel. It is brim-full of examples of the best pictorial work of Germany and other countries and articles that, as a rule, are less scientifically technical and more generally readable than those usually found in the German publications on photography. In fact, it resembles more, in its way, our own "American Annual." The reproductions, one hundred and twenty-eight in number, and printing, are also excellent. It is published by Gustav Schmidt, Berlin, W. 10, Germany. Price, four marks. Such of our readers as may desire a copy can notify us, sending one dollar, to cover cost and postage, and we will order a copy sent them direct, as we will shortly be ordering for several local readers. The book is one that should be in the hands of every German reading photographer.

Club News and Notes

Club Secretaries and others will oblige by giving us reports for this Department.

OREGON CAMERA CLUB.

On January eleventh, the Oregon Camera Club held its annual election, in the club's rooms at 207 Park Street, Portland, Oregon.

The officers elected for the ensuing year are as follows: President, H. J. Thorne; Vice-President, B. S. Durkee; Secretary, C. G. Seward; Treasurer, C. F. Richardson; Board of Directors, J. A. Haran, A. G. Myers, H. Berger, Jr., H. Husseck, J. V. Reid, and J. J. Tyrrell.

C. G. SEWARD, Secretary.

CALIFORNIA CAMERA CLUB CHRISTMAS JINKS.

On the evening of Tuesday, December twenty-eighth, the California Camera Club held a delightful Christmas Jinks in the Club's commodious rooms in the Commercial Building, Market Street, San Francisco.

A very interesting exhibition of lantern slides by members was shown, followed by a very fine series from the Interexchange. Miss Dorothy Dempster gave a piano solo, "Gondellied," and as an encore, "Forget Me Not," both of which were executed with great taste and correctness. Mrs. Titlow sang "If I Had a Thousand Lives to Live," and the audience, for the sake of posterity, hoped she would, and, for themselves, asked for another song, when they were favored with a "Sweitzer's Farewell."

Mrs. Cator recited "Hagar," which was a revelation in facial expression and appreciation of voice modulation. "Caste," by Montague, recited by Mrs. Cator in response to an encore, contained some real American humor. Two very pretty and effective items were the mandolin and piano duets by the Misses Franzen and Griffen, "Melodies from Robin Hood," and "The Merry Widow Waltz." Dialect Stories by Captain Leale need no comment for San Francisco readers. We will only say that Captain Leale is a true artist, and has the wonderful ability of knowing his audience at a glance. A graphophone and light refreshments filled up voids of totally different characters.

The Christmas Tree was a really fine piece of decorative work. And the Committee who had the whole affair in charge is to be congratulated upon a most successful and enjoyable evening.

CAMERA CLUB PRINT INTERCHANGE.

For the season now under way, this wheel of camera clubs is made up of the following: Portland, Maine, Camera Club; Boston Camera Club; Essex Camera Club; Orange Camera Club; Photographic Society of Philadelphia; Photographic Club of Baltimore; Capital Camera Club; Photo Section of Academy Science and Art; Akron Camera Club; Chicago Camera Club; and Buffalo Camera Club. Each club prepares an exhibit of from twenty to thirty prints, and ships them to the next club on the list. All clubs ship on the same day, and the eleven exhibits pass from club to club in the order named above. The last mentioned club ships to the first to maintain the circuit. It thus forms a great wheel moving every three weeks till June thirteenth, 1910, when its revolution is completed and each exhibit reaches home on time. A notification card is sent each club one week before each shipping date, calling attention to it so that it may not be overlooked. A return card is also sent. All exhibits are sent by prepaid express. It has been found that there is not enough difference in the amounts paid to warrant any attempt at adjustment. Each club writes as instructive and helpful a criticism of each exhibit as possible, and mails it direct to the Club owning the exhibit. Each is then in touch with its own exhibit throughout the entire circuit and knows just how it is being received. The secretary's address is, S. S. Skolfield, Portland Camera Club, 94 Commercial Street, Portland, Maine.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

IN THE NORTHWEST.

We desire to call the special attention of our readers this month to the full-page advertisement of the O. H. Peck Company. This old-established house has long claimed the distinction of being "The Big Photo Supply House of the Great Northwest," and, to anyone with a knowledge of that section and the houses that it contains, this is no small claim. We can fully recommend the house to any who may be unacquainted with it, the large number who are dealing with them requiring no such assurance from us. Their bargain list of high grade lenses should be sent for. The booklet on bromide enlarging will give you many most excellent suggestions in this line. Best of all, send them an order for your regular supplies, and experience the satisfaction of having your wants supplied promptly and in a businesslike manner without delay and the vexation of back orders. Address, O. H. Peck Company, 112-14-16 South Fifth Street, Minneapolis, Minnesota.

FLASH LIGHT IN THE STUDIO.

We wish to call the attention of our readers to the full-page advertisement of the Victor Studio Flash Cabinet, which appeared in our last or January issue. We saw this cabinet in use at the last convention at Seattle, and later had our own portrait made with it at a meeting of the California Association in this city. We hope to include, in our "How to Run a Studio" series of articles, one from a photographer in Steubenville, Ohio, a man who is doing the finest work and getting the best prices in his section, and who, despite the fact that he has a good modern skylight, has used this cabinet exclusively for the past five years. As explained above, we have had actual experience with the cabinet, and can recommend it thoroughly to our readers. Look up the advertisement. Write James H. Smith & Sons Company, 725 East Thirty-ninth Street, Chicago, and get full particulars. It is a matter worth investigating to the full.

A NEW PAPER.

The attention of our readers is called to the advertisement of the Bingham Company, which appears in this issue. Although the advertisement of the firm in our last issue was the first announcement placed by them, the firm has been quite busy for two or more years. As they wrote us months ago, they did not desire to place their goods generally until such time as they were absolutely sure that they could supply the demand, and supply it by turning out promptly and at all times only a perfect product. We would advise our readers to write them for "Booklet R," which they will gladly send on receipt of a request. The head of the firm, Frank R. Wyckoff, is an experienced manufacturer of photographic goods and chemicals, and every confidence can be placed in the quality of the goods manufactured by the firm.

AN A.-Y.-P. AWARD.

A Grand Prize, the highest award, has been conferred upon Messrs. Burroughs Wellcome & Company for their exhibit of "Tabloid" and "Soloid" brand of products, including the well known Tabloid Photographic Chemicals and the Wellcome Brand Chemicals, at the recent Alaska-Yukon-Pacific Exposition, held at Seattle.

A NEW ANASTIGMAT.

The Double Anastigmat "Eurynar" is a new introduction by the optical works of G. Rodenstocks of Munchen, Germany, and is one of a variety of photographic lenses manufactured by this firm. The "Eurynar" was placed on the market late in May, 1909, and the demand has proved so intense that the works have been enlarged to insure more prompt deliveries

after February 1st. Messrs. Jas. Frank & Son, of Augusta, Georgia, American agents, received lense No. 10822 in the last shipment from the works, showing the average sales of the "Eurynar" to have been nearly sixteen hundred lenses per month. The "Eurynar" has the distinction of coming from one of the most famous optical works of Germany, a country where they know what is good in optical instruments and know how to make them good.

THE NEW DEVELOPER, EROGEN.

The Letol Chemical Company, of this city, after exhaustive tests extending over several months, in order to assure themselves of the wonderful merits of this new developing agent, are placing Erogen, their latest discovery, upon the market. They have found that temperature does not affect its working quality, that it has a remarkable degree of latitude, that it is entirely free from any tendency to produce fog; and, knowing its chemical constituency, declare it to be absolutely unpoisonous. These qualities give the worker just what he has long desired. Using Erogen, he finds that, with exposures ranging from those bordering closely upon the hopelessly undertimed to those over exposed to almost the point of solarization, clear, crisp negatives can be obtained with the minimum of trouble. All that is necessary is to guard against an inclination, due to one's experience with fog producing developers, to cut development with Erogen too short. In developing plates, the action should be allowed to continue until the image appears quite distinctly upon the back. With some exposures, a slight veiling of the shadows will seem to take place at this point, but will disappear completely in the fixing bath. There is no fog or stain produced, even by an old solution that has been used repeatedly. This makes it a very economical developer. The same non-staining qualities make it eminently adapted to bromide and gaslight papers, on which it produces an image of those rich, velvety blacks so much admired in the best work. With the enormous latitude which it possesses, the danger of losing prints through error in exposure is reduced to a minimum; a wide range of exposures being possible with paper as well as with plates and film. Our readers should secure some of this new developer and give it a trial in their work. An ounce bottle costs but sixty cents. Supplied by the Western Photo Supply Company, 82 Third Street, San Francisco.

KRUXO H-E-M DEVELOPER.

The Kilborn Photo Paper Company are recommending a new formula, their latest, for pure black tones. It is called the Kruxo H-E-M developer; and, from results we have seen on Kruxo papers, it is fine. The formula is as follows:

Water	20 ounces
Acetonesulphite (Bayer's)	20 grains
Sodium sulphite (Kruxo)	½ ounce
Hydroquinone	20 grains
Edinol	15 grains
Metol	15 grains
Sodium carbonate (Kruxo)	½ ounce
Potassium bromide (sat. sol.)	24 drops

More detail will be obtained when printing from strong contrasty negatives, if forty ounces of water are used instead of twenty ounces. Prints from negatives of extreme contrast will show more detail if this developer is mixed with sixty ounces of water. By varying the quantity of water used, the developer can be regulated so as to produce the best results on any negative, whether it be hard or soft.

ARTISTIC AMATEUR PHOTOGRAPHS.

"What may be termed one of the best lot of amateur photographs ever shown in this city is attracting hundreds of people to the window of the L. Black Co. There are nearly one hundred of these pictures on exhibition and all kinds, from those made with a small Brownie up. It is all amateur work, by kodakers, including pictures of summer vacation scenes, marines, landscapes, groups, freaks, cloud effects, moonlight scenes and many other bits that are most interesting. Pinhole photography, although little practiced here, is represented by a remarkable piece of work. Freak photos, quite a number of them, that are a puzzle as to how they were made. "Playing Solitaire" shows one person sitting at a table in six different positions, so cleverly done that one cannot see traces of the six exposures that were made. Another freak that is amusing, shows a street, its buildings on each

side, with a flowing river between, and a steamboat coming down under full steam.

"For years Black's has been the center of attraction for the kodakers; here one can always find the latest things in photography as soon as its out."

The above is a clipping from a Detroit paper of recent date. The work was made up of pickings from the firm's printing and finishing department, remained in position nearly three weeks, and attracted thousands of people during that time. The suggestion is a good one that would be worth accepting by many other dealers throughout the country.

IMPROVE YOUR PRINTS.

Have you noticed how beautifully transparent the shadows are in the wet print? How brilliant the whole print appears? All these qualities are lost when the print is dry, the whole print is flat, lifeless and disappointing. A small quantity of Lustralene rubbed into the surface of the dry print will immediately restore all this lost charm, making a wonderful improvement in your print. Lustralene costs only twenty-five cents the tube, postpaid. It is made by the well-known pictorialist, George C. Elmberger, who will supply you with a tube upon receipt of price. Address George C. Elmberger, Department C, Jefferson Park, Chicago, Illinois.

A FINE CALENDAR.

We have seen some very fine calendars this year, but one of the most effective, and certainly the most interesting from an ethnological point of view, is the "Maori Belles" calendar kindly sent us by H. I. Jones & Son, Ltd., booksellers and stationers, of Wanganui, New Zealand. It consists of twelve sheets, on each of which is a portrait of a "Maori Belle," a half-tone, colored in imitation of gold toning, in the splendid style of half-tone reproduction which we are accustomed to associate with New Zealand illustrations. These portraits give an excellent idea of the characteristic beauty of the belles of the Maori race, aboriginals as well known for their intelligence as their fine physical development. These photographs are by Sorrell, of Napier, New Zealand, from which we learn that the New Zealand professional photographer is not one step behind his brothers in other parts of the world. This kind remembrance of "Camera Craft" at the beginning of the year is very gratifying, as it assures us that our magazine is read even in the uttermost parts of the earth.

BROMIDE ENLARGING.

One of the most profitable side lines for the portrait or commercial photographer is bromide enlarging, and today the trade in general is taking up this work to an extent not dreamed of a few years ago. The rapid growth of the business has developed a need for specialists; and the development of the specialist has demonstrated that he can do this work cheaper and better than the workman who makes only an occasional enlargement. The quality of an enlargement depends almost entirely upon absolutely correct exposure; and the ability to get the correct exposure comes only through the constant practice and experience of the operator. The expert, working all day, and every day, under a constant light, will make a better enlargement the first trial than the less experienced man will make after several trials, and without the latter's consequent loss of time and material. Again, in the specialist's plant the operator works with an equipment and with time-saving arrangements that are not possible with the small plant; and, in connection with his greater skill and certainty of correct exposure, his speed from constant practice, and his small waste, enable the specialist to produce and sell enlargements at a price that is lower than the actual cost of production in the average studio or workroom, when a carefully kept account of time and material is considered. Many plants already equipped for enlarging have discovered this fact and more are every day learning that it pays them to send their enlargements to a specialist, on the score of both economy and better quality of work. A leading firm in this line is the Photo Craft Shop of San Francisco. They make a specialty of high-class work, and the prices that they have made for first-class enlargements have aided enormously in developing the business. Their advertisement appears on another page of this issue, and their price list should be in the hands of every photographer. A postal will secure it for you.

Vol. XVII No. 3 MARCH, 1910 Price, 10 Cents

Camera Craft

San Francisco, California

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Cyko
PRINTS AT NIGHT

PAPER

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A PORTRAIT
By L. C. BISHOP

Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, MARCH, 1910. No. 3

Opening and Conducting a Studio

By L. C. Bishop

Our Prize Article for March

Capital is of first importance. The required amount depends largely on expenses, such as rent and living in the location decided upon. The extent of one's acquaintance with the trade sought will also have considerable bearing. Fifteen hundred dollars should be the least cash on hand for a small city studio; eight hundred if a country town. The surplus after equipment is paid for should not be less than five hundred dollars in the city; in the country, three hundred.

We are supposing the owner to be a capable photographer, up in all requisite branches, free from debt, and in good health.

The location should be selected with a reference to the trade expected. For popular-priced work, one must be where some prominence can be secured, where his place is easily reached, and where many people pass the door. The district most popular with the better class of working men is good; so also is "down-town" proper. If one aims at the new photography, he must figure on a different class of patrons. One must be more than a working man himself and be able to produce the real work; not simply fuzzy focus on what he shows in that line, but have a real knowledge of what it is that brings the money from the better class who ask for this work. The residence district is good for this, but the place should be near some old, well-established shop catering to the fashionable trade in millinery, tailoring, or the like. This store must have a good reputation long retained.

The operating light is very important. Be sure to have enough, and with the light coming from one principal direction. There should be no red or yellow buildings in front of the light or near enough to influence it. There should be enough room each side of the light to allow one to work in either direction. One may be experienced with all sorts of lights, but, if possible, get one that any one can work easily. I prefer a north light of clear glass, starting three and one-half feet from the floor, running ten or

twelve feet straight up, with four feet of top light, with a width of not less than ten feet. Have blinds of tracing cloth that can be pulled over the entire light, with a set of opaque ones working over them.

The equipment consists of lenses, cameras, and other apparatus. No one lens can be used for all things. Have a big one working at f-4, and not less than nineteen inches focus, for heads. Diffusing attachment must be included. For figures, groups, home portraiture, and the like, an anastigmat of thirteen or fourteen inches focus, working at f-5.6, should be used. One will also want a wide angle working at f-16 or a little larger, with a focal length of about eight and one-half inches. There should be two cameras; an 11x14 regular studio camera with an attachment taking 8x10 view holders and the regular cabinet outfit as supplied; and a home portrait camera outfit, 8x10 size, like the Century, and an extra studio stand on which it can be used for groups in the studio.

As to help, right on the start advertise in the daily papers for a neat girl with no experience, but with references as to personal character. One can expect many to answer, but be prepared to choose the most useful looking one for the try-out, taking the names and addresses of others that seem favorable. If you find your room full, waiting a hearing, announce that the salary will be only three dollars a week as a starter; this will clean out many of the undesirable ones. The young lady is to meet visitors at the door, show samples, which should always have prices marked on them, answer the telephone, and, most important of all, keep beggars and agents from seeing you and taking your time. Any bright girl will soon learn when to call you and when to say she is instructed not to call you for any other purpose than to arrange for sittings.

If you are not a first-class operator yourself, you had better engage one, for a while at least. If you are not an experienced platinum printer, engage an all-around man for at least long enough to get an insight; it's cheaper in the end. Any branch you may be weak on can be strengthened by employing a good man for a Sunday morning occasionally. Find him by advertising or call up your stock house. If you don't get a good one that way, look around at the exhibits at various studios and, when you see what you like, address a letter to the operator or printer of So-and-So's studio, offer him the proposition, and get his price for some Sunday morning with you. Treat him well if you want him again; you will get many valuable tips if you are sharp. Pay him three to five dollars. You will make that and much more through the advanced prices your work will command.

The young professional can charge from three to eighteen dollars a dozen for regular work. If he is capable of doing the new photography, his charges should be, for 5x8 platinums, five dollars for the first print and three dollars each for duplicates. A cabinet can be made in black and white platinum for eight dollars a dozen; sepias, ten dollars; half cabinets, five and six dollars. If a popular-priced studio, make the prints on matt surface printing-out paper, mounted solid, and run them through a cold burnisher. Half cabinets, two dollars a dozen; cabinets, three dollars; 5x8, five dollars; and 8x10, twelve dollars. Double mounted, that is, backed prints, should be tastily mounted, and they command double prices. Give your work some

THE STUDIO GIRL.

style; the mounting means much to the picture. Study the mounting of prints shown in the art stores, for your better class of work. The regular cabinets should be mounted solid on a rather plain mount of good quality, the prints being on printing-out paper, and run through a cold burnisher. Anything you want to deliver mounted by the corners should be on platinum paper, or on printing-out paper, backed. Great claims are made for double-weight developing paper, but, personally, I would not use it unless I was doing cheap work. The large finishing plants are prepared to deliver prints on developing paper so that they will not curl badly, but the professional with the small studio can't afford the machinery they use. If you want to see just how bad the paper is, examine the displays made by some of the medium-priced studios where they mount their developing paper like platinum. They look cheap to anybody upon even superficial examination. Some of these papers are better than others, but the public has learned much and it knows that one can get developing paper prints from the Kodak finishers for five cents a print, while they can't get platinum or matt printing-out paper prints from these houses. Use the matt printing-out paper, mounted flat, for the cheapest work, the same paper backed and loose mounted for the next, black and white platinum for the next higher, and sepia platinum for the most expensive.

Do not copy the work of the operators who make popular-priced work; study some of the work done by our big professionals of ten or fifteen years ago. This last is better and work of this kind is more desirable to the public today. The new photography acquires its greatest stimulant from the work done by the advanced amateurs. These people study art from every conceivable viewpoint, and use the camera to express their ideas, much as a painter uses his brush. They study pictures and use their knowledge intelligently. They do not, as some of the less progressive seem to think, use a bad lens or focus improperly in order to become one of the new school.

Pictures that you sell by the dozen should not be fuzzy enough

PENSEROSA.

to attract attention to that particular. The softness of focus should be regulated according to size. The large heads can be made quite soft, but any double lines must be worked out. Landscapes can be quite fuzzy for beautiful broad effects. A single combination of an ordinary rapid rectilinear lens, if it has good speed, is capable of making large heads of better quality than the average anastigmat, even when the latter is fitted with a diffusing attachment. Make your regular run of studio work thus: Half cabinets a trifle softer than the sharpest rectilinear will give at full opening; the cabinets a trifle softer; and extend this idea until you can tell by the ground glass what degree of diffusion is right. The sharpest focus of the anastigmat is too sharp for contact printing in portraiture.

Visitors and old customers must be carefully handled; they can be influenced for or against you according to the impression your treatment of them creates. Never allow anybody to stay too long or yourself to become too well acquainted with them. Just a favorable impression is all you need, and more than that is usually detrimental. You may offer the visitor a seat while you show the work and quote prices, but you do not sit down for a visit. After you have accomplished what you consider a fair explanation, show a desire to get back to your work. If the visitor attempts to hang on longer, your assistant should come from the work room and say your attention is needed at that moment.

Salesmen like to loaf around and take your time. Better say at the start that you can give them a certain number of minutes, five, ten, or fifteen, and end it at the expiration of the time set. See them outside of the work room, always. While the cases are rare, some salesmen are full of valuable information, and these are to be appreciated. It is therefore well to ask a few questions while your time is being taken, as valuable information is often worth more than a sitting.

When you deliver pictures to a patron who is just a little disappointed, be willing to do the right thing. Offer to print over or even do the retouching over before reprinting. You must show them that you are willing to do

your part in order that they may be pleased. Caring for those once sold is the building of your foundation in any business. Be as courteous after you have the money as you were before.

A good personal appearance is of the greatest value. You should dress and look like the sensible, up-to-date people of your age. Shave every day and get your hair cut every three weeks. People of good taste do not like to be depicted by a photographer of bad taste; one with a long and greasy foretop. Be clean. Try to associate with people who are as good as the best of the friends you have ever known. Don't invite your friends to call during business hours, unless you believe they are in the market for your goods. Don't drink during business hours. Use good language, but simple words.

PORTRAIT OF A BOY.

Don't say silly things while operating; old chestnuts are a bore to any one, and the small talk business just before pressing the bulb is out of date. Replace it with some intelligent conversation. Natural manners on your own part reflect themselves in your subjects best of all.

Don't expect to achieve par excellence with some new, quick-working apparatus. The market is full of them. Don't sell coupons or make cut prices. Once in two years you can send out to your old customers a reduced rate on duplicate orders, cash to accompany the order, and good for ten days. That will be sufficient and will keep you in touch with them. Keep yourself informed in all that is new; visit art exhibitions, and read the best photographic magazines. Paste a slip on the cover for notation of valuable formulas you may want later, or clip them out and file. Read other magazines, like "Harper's Weekly," that will give you a grasp of what is going on in the world; go and examine the displays of other photographers; invite criticism of your own work, and don't get angry at the nice things you hear.

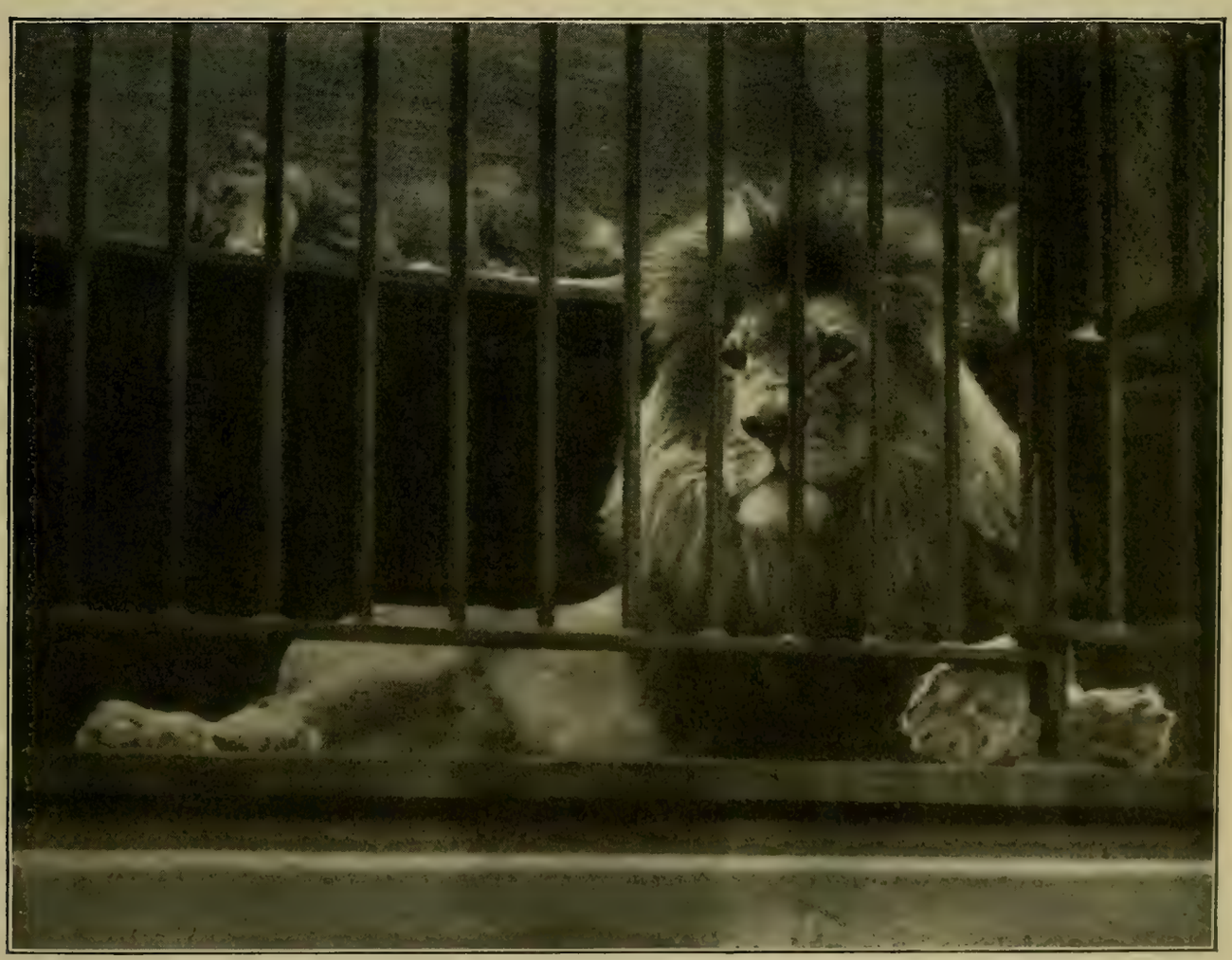
Collect a deposit on all work and, if it is necessary to explain to Mrs. Newrich, say that you must do this in order to be considered prompt pay by

PORTRAIT OF A CHILD.
By L. C. BISHOP.

your dealer, and that, unless you do collect a part payment, the outlay per day would greatly impede your progress. If you discount your bills every month you will save a snug sum in a year and the stock house does not regret the three per cent. A thrifty business can always give better value than can the other kind.

Make your work appear clean. Above all, get pure tones; real white in the black-and-white prints, not lead-colored ones. In the sepias avoid yellow whites and muddy or bronzed shadows. Give your show-windows your close personal attention. Criticize them daily. Not too many pictures, but good ones, should be the rule. Use the best material, regardless of whether so-called trust or anti-trust. There are no bargains in material. The reliable goods are so well known that any one can readily decide.

Try to get a good picture with every plate and do not be stingy with them, making three or four for your moderate-priced work and five or six for the better grades. Reckless firing of plates is worse than the practice of the fellow who only makes one providing the subject didn't move. Retouch your negatives somewhat before proofing, paying the most attention to the better ones. Never show a bad one.



HIS ROYAL HIGHNESS. By R. E. WEEKS.

The Right Way to Color Photographs

By Charles F. Fisher

A sample of Mr. Fisher's work, which reached the editor during the holidays, in the form of a New Year's greeting, was much admired by visitors to his office. Several of them insisted that it was impossible to secure such fine blending of tints and absence of crudity in a hand-colored photograph. They believed the picture to be a sample of three-color carbon work or some kindred process. Mr. Fisher was asked to explain his method, and the following article is the result of his kindness:

THE GLOWING GRATE. By A. J. RICH, JR.

TODAY many amateur photographers are attempting to turn their favorite prints into more attractive forms with the aid of a little water color. This is a praiseworthy tendency, for the colored photograph, if it be well colored, is a vast improvement over the ordinary black-and-white print. But, while a colored photograph may be a thing of beauty, the art of making it may not be a joy forever. Many ambitious workers have encountered the difficulties well known to us all and, after a few earnest efforts, have given up in despair. Discouragement is not necessarily a bad sign, but, to give up and acknowledge defeat, there is the stone upon which many a photographic masterpiece has been shattered to pieces. If one appreciates excellency, he ought never to surrender, but continue to make the effort until he has discovered a new way to his goal.

The chief trouble encountered in coloring photographs is the difficulty of working with the dry print, the print in a dry condition. The spongy surface and body of the print absorb water very quickly, leaving unsightly brush marks or lines of application if the entire surface is not entirely and quickly covered. This necessitates hurry, and it is impossible to do good work if one must labor in feverish haste. Or, when the surface of the print is of a glossy nature, it refuses to take the color and resists its application as the back of a duck resists water. It is customary, I believe, to treat such prints with "sizer," a preparation which is intended to prepare the surfaces of some papers for the reception of the color, and which is supposed to work alike for the better handling of all prints and surfaces. But this treatment is not always successful and oftentimes leaves the surface gummy or sticky

and very unwieldy under the touch of the brush. It was only after I had made such discoveries for myself that I said: "There must be a better way." And, acting upon that inspiration, I discovered that the solution of all my troubles lay in the wet print, that is, the print in a wet condition. After some experimenting, I discovered the simple method which I shall here describe; and, that it is successful, is proven by the fact that many have refused to accept the finished prints as hand work.

It would be possible for me to tell my entire story in five words—soak the print in water—but I believe that a brief description of my method will help some aspiring worker to success, and I shall, therefore, set it down. Let us see that we have the proper material with which to work. Purchase from any Eastman agency the booklet of Japanese Water Colors, and dissolve the color from one-half of such leaves as you may wish to use, say blue, green, yellow and sepia, in small, wide bottomed bottles. Kept well corked, they do not evaporate, are always ready and handy, and the large bottoms prevent accidental tipping over. The choice of good brushes is important. A stiff sable answers best, a half inch for large surfaces and a smaller size for working in detail and for use on restricted areas. Have a number of sheets of clean blotting paper, a little larger than the print to be colored, a discarded negative from which the emulsion has been stripped, a piece of thin board or cardboard a little larger than the blotters, two tumblers of clean water, one of which is to be used for cleaning the brushes. Several minutes before you are ready to begin, put the prints into a tray of water and allow them to become thoroughly saturated. And you need not give the surfaces a second serious thought, for the troubles that you have known are at an end. You will discover that they are all alike, submissive, save that the rough surface will absorb the color a trifle more readily than the smooth. Now soak one of the blotters as full of water as it will hold, allow the surplus to drip off, and place it on the board. Take one of the prints from the tray and lay it on this wet blotter and allow the surplus water to remain. Care should be taken in handling the dry print not to touch its surface with the fingers, for wherever there is a perspiration mark the color will not "take."

The first print you select is that of a very simple scene. There is a broad, open sky, a row of bushes in the middle, with a pond of water in the foreground. Turn the board about so that the top of the print is at the bottom, and hold or allow it to rest at a slight angle. Take a drop of the sky blue and dilute it on the glass plate with clean water from the other tumbler. Have a generous quantity and have it very dilute. Saturate the large brush with this, and spread it onto the sky with a few quick and even "swashes," beginning at the bottom and working gradually up toward the bushes. Shade it off so that the faintest trace of color stops just a little short of the bushes. To gain density it is better to "swash" the dilute color on repeatedly rather than by means of more heavy color. To secure the most beautiful and delicate shading, which is the secret of the perfect blending of two colors, keep that part of the print well covered with water. When the sky has been satisfactorily done, all surplus color and water should

be blotted off Turn the board about and treat the pond in the same way, gradually working up toward the bushes, and leaving off as before just short of the lower edge of the bushes. When this is done, again blot dry. The next step will be to put in the horizon color or the atmosphere, the faint, delicate tint which is to be put in just above the bushes and blend into the lower sky, and reflect down into the water of the pond. Cover the upper pond and the lower sky with water, using one of the brushes, and allow it to lie on up to the point where the blending is to take place. Having prepared a very dilute color, say yellow, lay the board flat and work this tint on over the bushes, working it up and down until the right distance has been covered to secure the proper blending. If the color takes hold slowly, continue to "swash," for in this way the most delicate blending will be the result. When this has been accomplished, the print is again blotted. Now, using a smaller brush, go over the bushes with a green of good density, carefully working in any details. This entirely covers the atmosphere color which had run over into the bushes, and, as the surface is just a trifle gummy, the color lies on where it is left, with but a slight tendency to run. The print is now blotted dry and receives its final drying in the usual manner. It is well to remember that all colors intensify somewhat in the drying. If the next print happens to be of a more complicated nature, with figures and detail, the process will be altered to suit the case. If detail work is to be done, the print should be blotted, and the color laid on with a small brush. Oftentimes a lighter color may be laid on over the entire print, and the darker objects, as trees and houses, treated to a darker color.

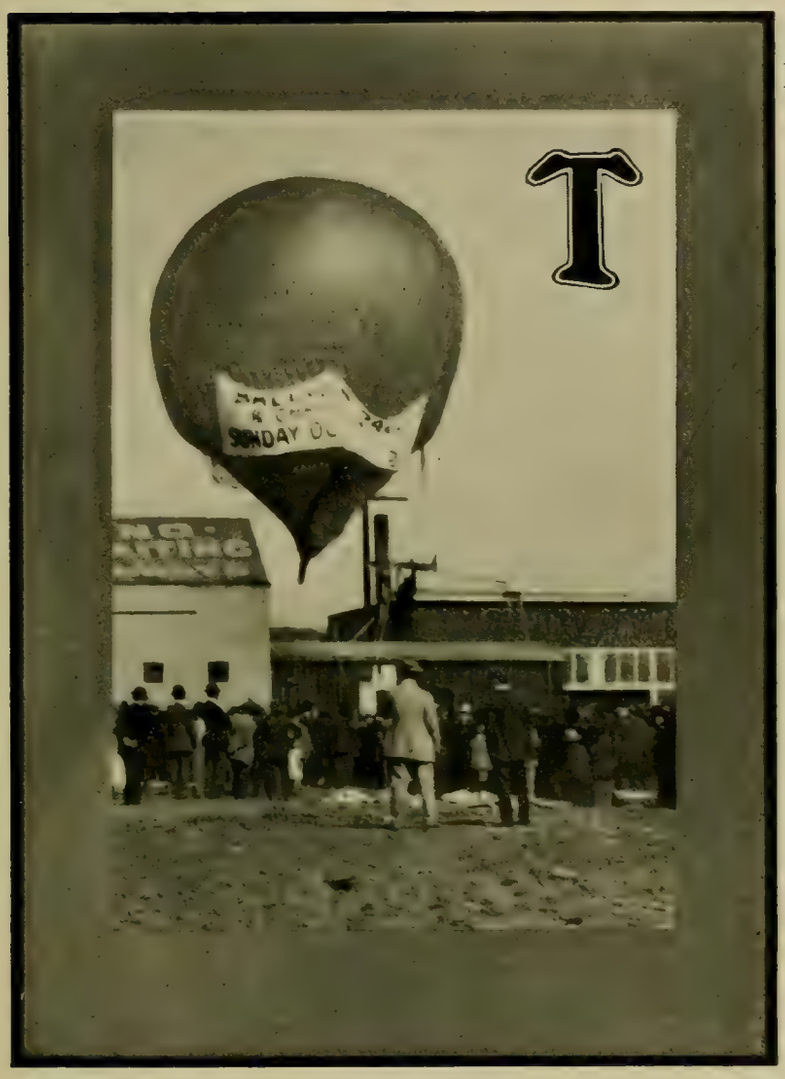
A little practice will reveal to the reader the simplicity and the efficiency of this method, and he who adopts it and sticks to it till he succeeds will discover that it has the following advantages:

1. All surfaces may be successfully treated without the use of "sizers."
2. Beautiful and subtle blending is accomplished with the only good blending agent—water.
3. The wet print, when blotted, presents a sticky, semi-dry surface, which holds the color and prevents running, save just enough to accomplish a slight and sufficient blending.
4. The wet blotter upon which the print rests acts as a reservoir, thus keeping it constantly damp. This does away with the necessity for haste, and the work may be done deliberately, giving time for the studying of effects before colors are added.

This revealing power of art is not restricted to the individual appreciator. It is said that the French are an artistic people and that Americans are not. The explanation is that for generations the artists of France have been discovering to their countrymen the beauty that is around them at their very door, and have taught them to appreciate it. The Americans will be an artistic people when our artists shall have done the like for us. When there shall have been for generations a truly native American art, there will be a public to understand and appreciate.—Carlton Noyes.

Balloon Photography Is Exciting

By Thomas Pierce Lloyd



THE BALLOON JUST AFTER BEING INFLATED.

THE photographer, in the course of his career, is often fortunate, or unfortunate, enough to accumulate a number of experiences, more or less exciting, oftentimes reaching the point of being dangerous. Not long ago it was my good luck to be one of a party to what might have proven a very serious affair. This had to do with the work of Arthur C. Pillsbury, of the Pillsbury Picture Company, of San Francisco. Among other paraphernalia, the company has a captive balloon of ten thousand cubic feet capacity, which they use for the purpose of making bird's-eye views and panoramas of cities and large tracts of land.

On the day selected, one showing signs of being ideal for the purpose, we shipped the balloon and photographic traps to the northern part of town for convenience in inflating the bag at the large gas tanks located near Meigg's Wharf, North Beach. With the exception of having to lift the balloon over the telegraph wires along the water front, very little trouble was encountered while inflating the bag and getting it to a large tugboat to which we intended anchoring it with a five-hundred-foot cable. So anchored, we expected we could tow it at will along the city's front and secure a variety of views showing the city and the water front. Everything proceeded nicely, the weather proved to be exceedingly favorable for the ascent; otherwise we might have encountered trouble sooner than we did.

As it was, we had gone the entire length of the city front; Mr. Pillsbury, from the basket of the balloon, making good use of the four cameras with which he was equipped; and then came our first taste of mishap. For some reason or other, probably the effect of a cooler current of air upon the gas in the balloon, the huge bag began to descend slowly, slowly. Mr. Pillsbury, seeing his predicament, signaled us aboard the tug to make for the landing

ONE OF THE PICTURES MADE ON THE TRIP

from which we started. Doing so, we had proceeded but a short distance, coming directly opposite the Southern Pacific Ferry slips, when we noticed that the balloon was within one hundred feet of the water and descending very fast. In the meantime, Mr. Pillsbury had realized his plight, and to relieve the weight of the basket had thrown over the anchor rope and anchor. This had the effect of stopping the descent for only a few moments, when again it began to settle, this time descending to the water, immersing the basket and contents, Mr. Pillsbury having hoisted himself, taking some of the cameras with him, into the rigging above. While in this position, the basket was dragged through the water for twenty or more yards. In the meantime, we, on the tug, had come about so as to be of service, if possible, in case the balloon settled into the water; but, owing to the position of the bag itself, we were practically powerless to render assistance.

At this critical point a stiff breeze sprang up and lifted the balloon some fifteen feet above the water, enabling us to bring the tug beneath the basket; and, at no small risk of a good wetting, we succeeded in transferring the several cameras from the balloon to the boat. One of them was an especially constructed camera designed to take a film 16x40 inches, an instrument of no small weight. The balloon, relieved of the weight of the cameras, shot into the air at a terrific rate, drawing the cable by which it was fastened to the tug taut as a fiddle string. Mr. Pillsbury, in relating that part of the incident, mentioned his belief at that time that the huge gas bag would force itself through the fine cords of the net, and doing so, precipitate him into the water. This would have been more dangerous than having the entire balloon break its moorings to the tug.

From this time on the breeze continued to gain force until the balloon no

CUT IN TWO TO ALLOW PRINTING ON TWO PAGES.

longer floated above the tug, but was blown at quite an angle to our stern. The wind still increasing, we decided to stop the engines in order to relieve, if possible, the tension on the rope; but this proved of no avail; the balloon starting to tow the tug backward. Realizing that it was impossible to carry out our original intention of towing the balloon back to the starting point and there deflating it, we laid our course for the nearest landing place, a point some three hundred yards north of the Ferry slips. We had made about twenty yards in this new direction, and in about as many minutes, when, all in an instant, we felt a jar, found the rope that held the balloon at our feet, and, over our heads, Mr. Pillsbury and the balloon racing upward at a terrific rate of speed towards the clouds. They continued to rise rapidly until a height which we estimated to be five thousand feet was reached; then, starting in a southerly direction towards San Jose, passing from our view as a tiny white speck in the sky.

Not knowing to what dangers Mr. Pillsbury might be exposed, we landed, organized several relief parties, and started in search of the runaway

ONE OF THE PICTURES MADE ON THE TRIP AND ANOTHER VIEW TAKEN FROM THE BALLOON, SHOWING THE POINT FROM WHICH THE START WAS MADE.
Copyrighted 1909 by PILLSBURY PICTURE CO.

balloon. At eight-thirty that evening we picked him up at Newark, thirty-one miles south of San Francisco, in a mud-bespattered condition, none the worse for his severe bumping and cold, salt-water bath.

In relating his adventure, Mr. Pillsbury says that of all his varied experiences, the balloon trip was the most interesting; his only regret being that he did not have a camera available when he reached the maximum altitude, the view being the most wonderful he had ever seen, including, as it did, miles and miles in all directions. Having no means of helping himself in the matter of anchor and ballast, the landing proved to be the most dangerous part of the proceedings. When directly over the city of Newark, the balloon entered a belt of cold, mist-laden air and, in consequence, started, at a terrific rate of speed, for the earth, not easing up until it again entered a warm current of air. Even this seemed only to ease the fall, for it was but a few minutes before the basket struck, amidst a shower of mud and water. This was in the marsh about three miles from Newark. This was not a dignified landing; in fact, it was in no sense a landing; the balloon merely gave a huge bound, coming to earth again in the center of a muddy creek, a quarter of a mile distant. The luckless occupant of the basket was helpless; he could only hold on and take what fate had in store. The wind caught the bag and carried it along, dragging the basket through the creek bed for some two hundred feet. Then it changed its course, rising over the bank and across the tules on that side, only to dump the basket into another very muddy creek. Here

ABOVE THE CITY. By R. W. ARCHER.

the basket lodging beneath an overhanging bank, Mr. Pillsbury was enabled to scramble out and allow the gas to escape from the balloon.

It was here that we found him, some five hours later. He had, in the meanwhile, dismembered the balloon and got it ready for shipment home to San Francisco. Of all the exposures made while in front of the city and before the trouble started, only three rolls of 4x12 films were saved. These Mr. Pillsbury had strapped to his body while floating over the Santa Clara Valley. Two of the photographs are reproduced herewith, as are also two pictures of the balloon. One of these last shows the bag just after being inflated at the gas tanks, and the other, by Mr. Archer, shows it while floating aloft.

Learning Photography by Correspondence

By Charles W. Lancaster

President American School of Photography, Dahlgren, Illinois

Until recent years it was thought impossible to teach photography by means of correspondence. Even the books which essayed to give instruction often advised that the learner should seek a practitioner and obtain personal instruction. However, now that photography has well passed the experimental stage, as have also the well-directed efforts of those who have sought to teach it by mail, correspondence courses in photography have been the means of giving thousands of men and women a high proficiency in the various branches of the art. The perfected form of instruction by correspondence is but the natural development resulting from the desire of many, who, for various reasons, are denied the privilege of attending a school in person. So highly perfected has the method become that one desiring a practical knowledge of photography needs only to be able to read and write, and to possess the average amount of common sense and good judgment. Not only is this true of photography as a subject of mail instruction, but of numerous other professions.

On the subject of the efficiency of correspondence schools, President Harper, of the University of Chicago, is quoted as saying:

"In some respects there is opportunity for better work in correspondence study than in ordinary class-room recitations. Each student in the correspondence course has to recite on all the lessons, while in many a class room the student recites only on about one-thirtieth of the work during a course.

"It is safe to say that the standard of work done in correspondence courses is fully equal to the work done in the large class; indeed, I may say there is a larger proportion of high work done by correspondence than class recitation. People who take work by correspondence do it because they want to get something out of it; while, in many courses in colleges, the students take the work merely because it is required by the curriculum."

President Pritchett, of the Massachusetts Institute of Technology, said recently:

"The growth of such schools, whose students are drawn wholly from those that are denied a college training, is the most striking evidence which can be presented, not only of the need which men feel for individual training, but of their determination to obtain it. In Massachusetts alone, more men and women are seeking training in correspondence schools than in all other technical schools, public and private combined."

The reader may ask: "How is a practical knowledge of photography successfully imparted by correspondence?" Briefly, the answer is as follows: Each subject, in its order, is covered by numerous lesson sheets, diagrams, and photographic illustrations; explaining, to the most minute detail, each step for the student to put into actual practice. The results of each student's practice, after each lesson, are submitted to the instructor in the department of negatives and prints, for his criticism. Any mistakes are easily detected and an explanation as to how made, the remedy thereof, and how to be avoided in future, made in a written reply. This is continued until the work of the student shows that he has mastered the situation. "The only token of the master's hand is his work."

In the correspondence form of instruction, the subject can be treated more minutely as to details; the principles are more readily assimilated, and. where necessary, committed to memory; important parts can be read and reread until they become as an open book. In class instruction the student is often timid about asking the same questions over and over; but, when put in writing, the explanation can be referred to as often as necessary without the least embarrassment. Written instruction permits the student to apply himself to the subject in hand in his own peculiar way, it being rare that two persons will perform the work in like manner, though the finished result be the same in both cases.

Let us take, as an example, the lighting of the face and figure in portraiture. To obtain the best results in making the different effects, the light must be properly curtained with the right kind of screens and controlled with other screens and reflectors where needed. The subject must be properly placed in relation to the source of light; the camera must be in the right position; and the shades, screens, curtains, and reflectors properly arranged for the particular effect desired. All this can be explained most completely in writing, assisted by diagrams and photographic examples, by an instructor a thousand miles away. The same instructor has only to have the specifications of any light that the distant student may be using, in order to tell him just what can be done under it. When it comes to the work of the student being sent to the instructor for criticism, the advantage of correspondence work becomes strongly apparent. The student is not confused by the mistakes and efforts of others; it is as if he were enjoying the benefit of separate and individual instruction; the plan bringing the instructor to the student, instead of the student having to go to the instructor.

This means much to the photographic student. There is no heavy expense for railroad fares, board and room, and the like. He is not losing

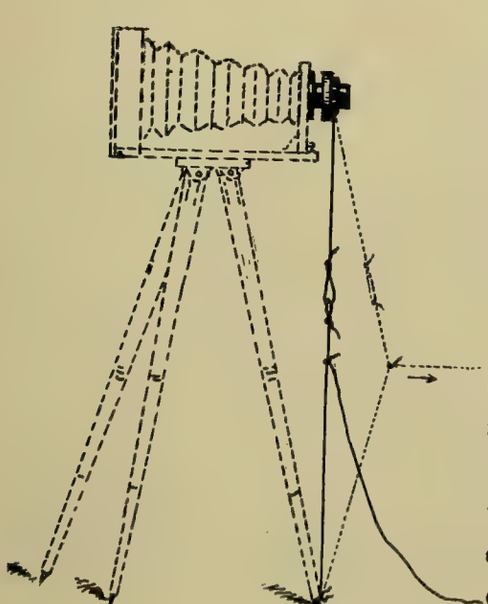
time, particularly while not earning a cent in income. He is enabled to remain at home or in his own studio; the subjects which he employs in taking up the various steps in the course can often be made to pay the expenses, sometimes more, while he is learning. The pictures that will be sold during the practice work will pay the expenses of the course and, quite often, considerably more. Is there another profession that offers this advantage to the student while learning?

Let me add, however, that photography is exactly like any other business. If success is to be achieved, study must be given, a practical understanding thereof must be secured, systematic business methods must be applied, and energy and honesty made the guiding principles. Any business or professional enterprise is like a sounding board; if it be struck a weak and indecisive blow, the results will be of the same character; but, on the other hand, if one smite it with a will, a will born of determination, the results cannot fail of being most gratifying.

A Sensitive Shutter Release

By Prospero Barrows

In "Camera Craft" for March, 1909, Mr. Dillon described a useful method of releasing a camera shutter so as to take the operator's picture. I believe the box and float are unnecessary, and substituting a long piece of very fine thread is less trouble. Instead of using a box and float, I fasten the lower end of the string to the lower end of the tripod leg in such a way as to make the string adjustable for the right amount of tension. The lower down the fastening, that is to say, the longer the string for the same tension, the more sensitive the shutter action becomes. When this is done a very slight touch at the middle of the string, or a light pull of a thread tied to this middle point on the string, will easily set off the lever and operate the camera after the shutter is set.



It is sometimes desirable to work the shutter from a distance, whether the operator is included in the picture or not. This thread works equally well in all directions except straight up. This arrangement is more certain than Mr. Dillon's device, especially when active children, in a group, are liable to get out of position at the last moment. Incidentally, a very fine thread will be out of focus near the camera, and does not show at all in the picture if it is gray in color or if there is not too much difference in the amount of the illumination between the background and the thread. When a weak or shaky tripod is used there is no risk of moving the camera with any ordinary pull of the thread. The smallest thread made is more than strong

enough for this purpose. But to give full detail: Take a short piece of common string and fasten one end of it to the floor or the lower end of the front leg of the tripod, the lower down the fastening the better, and then make a loop in the other end of this string that will not slip. Take another piece of the same string and fasten it to the release lever of the shutter. Next, set your shutter by raising the lever to the highest position. Avoid an accidental exposure by leaving the cap on the lens, or by not drawing the slide in the plate holder. This is very important if the operator is inclined to be careless or absent-minded. Then pass the upper string through the loop in the lower string and pull up with your toe against the bottom of the tripod leg so as to avoid accidentally lifting the camera. When the shutter snaps, both pieces of string will be just tight enough. Now is the time to tie a knot, but avoid tightening the string any additional amount after the shutter snaps. Now fasten a fine thread, the finer the better, to a point on this string half way between the lower fastening on the front tripod leg or floor and the upper fastening on the shutter lever. When the shutter is set for the picture, the string will have just the right amount of tension. Never start to take the picture until the thread is securely tied and strung out to the place you expect to use it, or you will surely spring the shutter at the wrong time.

Do not tighten the string for time exposures or, when you pull the thread the second time, the shutter will remain open and spoil the picture. The shutter is not nearly so sensitive with the loose string; but this will not make much difference if the operator is careful each time the thread is pulled.

SUMMER EVENING. By J. H. FIELD.

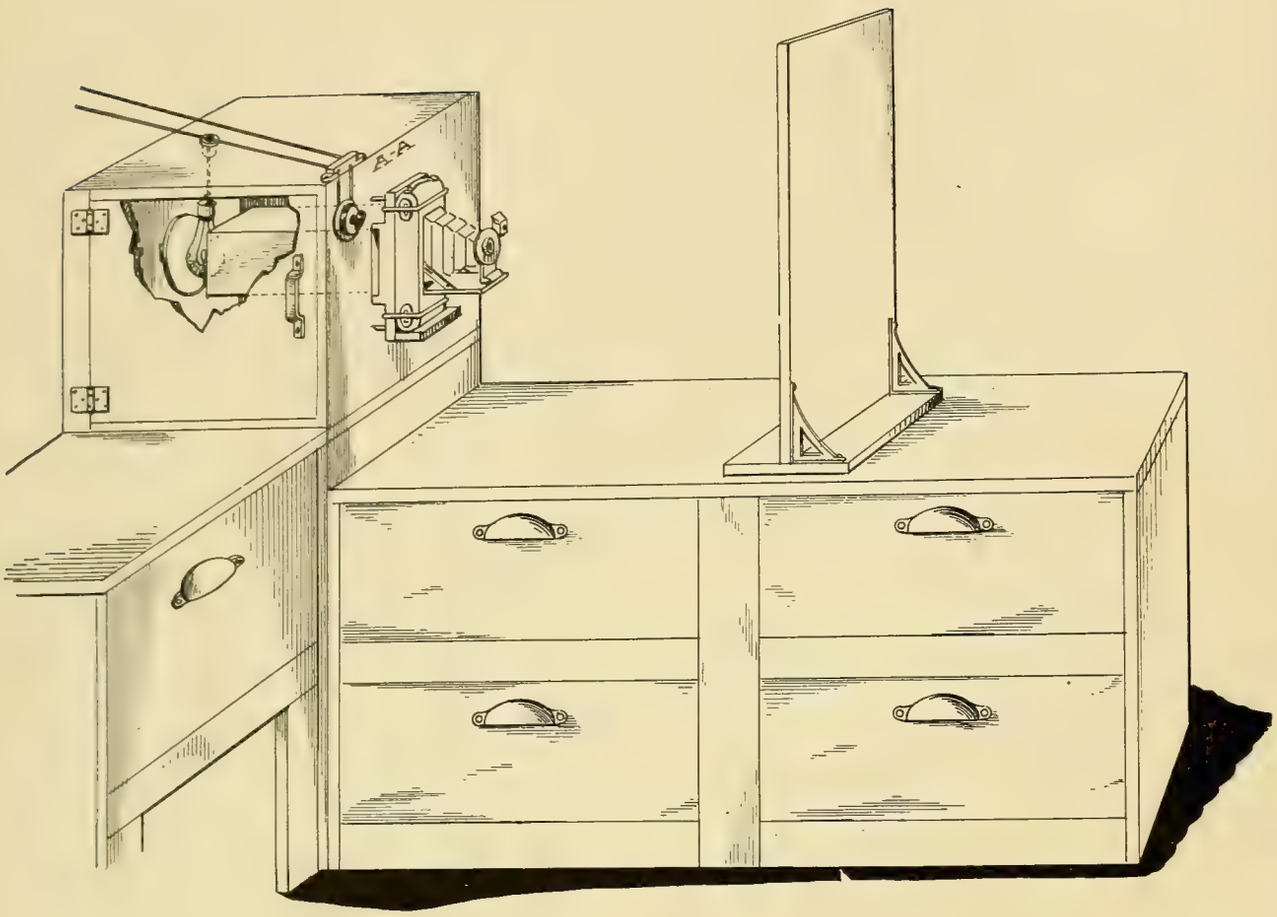
A Home-Made Enlarging Machine

By Homer J. Taylor

It seems to me that the most befitting way for an amateur photographer to start his first article is to tell how he originally caught the photo germ and how this grew until it developed into the full-fledged disease. After once contracted. there is no known cure, and the only relief I have ever heard of is obtained by the proper use of a solution composed of metol, hydroquinone, sulphite and carbonate of soda, with a little bromide of potassium mixed in. Follow this solution with a bath of hyposulphite of soda and afterwards by a thorough rinsing in clear water. This may be varied, but, on the whole, will relieve the subject quicker than anything that has yet been discovered.

For my trouble I blame my mother, and it dates back about nineteen years ago. She was visiting in Washington, D. C., and one night, while in the parlor of the hotel, a young man offered some tickets for a drawing of a camera. Congressman McKinley, whose guest she was, bought two, one for his wife and one for mother. Mother won, and I got the camera. I was attending boarding school at the time, and it was with great joy and expectancy that I got her letter informing me of the fact. Just about this time, Kodaks, with a hundred exposures and a "you-press-the-button-send-it-to-Rochester-and-get-it-in-two-months" arrangement, were getting popular, and this was what I had in mind. Instead, I got a large crate, and, after opening, found it contained one of the old-style "A. & S." 5x8 cameras. It was mounted with some sort of an ordinary lens covered by an ill-fitting cap. The one plate holder leaked light in several places. Great was my joy when I finally made my first negative and, though very crude, I thought at the time it would be a prize winner. Year by year my enthusiasm developed with each succeeding plate, but with an ever-increasing desire to own something better; and my list shows a large and varied assortment, from a vest-pocket size to one nearly as large as a soap box. I have a 3A Kodak now, fitted with a Cook, series III lens, Multi-Speed shutter, and combination back, but I am just crazy for a Graflex. So, I suppose, it will go on until my pictures are all that is left of me.

After getting my present outfit and fixing a complete working room and "studio," a friend of mine, who also has the "disease" quite badly, initiated me into the degree of enlarging. After he had made several enlargements from my negatives, I had another "relapse" and decided I too would enlarge my pictures. However, I had gone to so much expense in fitting up my work room (I had to employ a plumber) besides my outfit, that I didn't feel like buying an Aristo lamp and enlarging machine. So I figured out that I could build one of my own. After burning much midnight electricity and spoiling not a few sheets of bromide paper, I finally made a machine that can do work as good as my friend's hundred-dollar outfit and fast enough for any purpose. I am not restricted to size, either, as I have made up to 18x20 thus far. And here let me add that, if you have never tried enlarging,



you have a new pleasure in store for you. I have made a rough sketch of my machine and, if you will follow the balance of this article, I will try to describe it, so that any one handy with a saw, hammer, and pair of pliers can make the same thing for less than five dollars.

You should have a bench at least seven feet long. If this is not possible, a shelf two feet square, with a movable table, on which to put your focusing easel, will do. I have the bench and, as the drawing is made from mine, I will describe in that way. At one end I have an elevation about eight inches high and eighteen inches square. On this build a box eighteen inches square and eighteen inches high. A door should be on the side next to the operator, facing the edges with black cloth so that it will not leak light. On the side looking toward the bench, and which I will call hereafter the front side, cut a hole just a little larger than the plate you expect to use. I use a 3¼x5½, so that my opening is about 4½x7 on the inside of my board, which is one and three-fourths inches thick, beveled to about 3¾x6 on the outside. Cover this hole on the inside with a piece of ground glass, countersinking so as to come flush with the board, ground side out. Have a tin box made, open at both ends, ten inches long, one end being just the size of this hole. Turn the edges out one-fourth inch on the sides for tacking to board. The other end should be about an inch smaller each way. Your tinner can easily make this, and the brighter and cleaner the tin the better, as it is to be used as a reflector. At the smaller end of your box fit a Tungsten light. I use a hundred watt, and find this size very satisfactory. Back of this arrange a bright reflector. The old-fashioned silver lamp reflector I think is the best, and can be got in almost any store for a quarter.

Where you do not have electricity, gas with a Welsbach can be worked in on this plan. The outside, or front, of the board is after the same plan as the Eastman Company describe in a little booklet called "Bromide Enlarging with a Kodak," and is obtained free from any of their agencies or direct from them. They describe for daylight, but if you will follow my instructions for everything back of the board A-A and theirs for everything in front, you need not depend on daylight, which is impracticable for many workers whose time is taken up in other duties during the day. After you have made the rack, as described in this little book, and fastened your camera with rubber bands, insert your negative in the space therefor, covering the small opening with a dark cloth. Make an easel as shown in the sketch, about 2x2½ ft., and onto this will be made your reflection when the light is turned on. After you have determined the size of your picture, move the easel back and forward until this size is reflected, and then focus for sharpness by sliding your lens forward or backward. When it is focused, stop down, the size of aperature depending on the density of your negative, all of which can be determined with a little experience. Cover your lens with a ray filter. Take a small strip of bromide paper, about an inch wide and six inches long, pinning it to the easel with push pins. The exposure should be tested by exposing the whole strip for, say, a minute, then cover a third of it for half a minute, and in one-half minute more another third. You can then gauge how long an exposure you should give. As to kind of paper to use, I find that Eastman P. M. C. answers every purpose. It does not cost as much as most others, and I have never found any fault with it. Of course I have Royal Bromide and other better papers for special work. Another thing about papers that I have found to be good is to buy them in ten-foot rolls, twenty inches wide. You can then cut to any size wanted, and you do not have to keep a lot of sizes on hand that you don't often use, or use a size you don't want.

For developer, I use the metol-hydro given on page 15 of the little book referred to, and get good results. Every one has his own pet developer, and there may be some who differ with me, but, until you find something better, stick to this one.

The board in front of dark box can be used for cutting and otherwise handling the paper to be used in the enlargement; the cutter, knife, and scissors can all be handily placed upon it. The necessary illumination can be had by means of an opening, say 5x7 (more or less), in front of and level with the lamp inside the box. This opening should, of course, be covered by setting in a yellow glass, or even better, a sheet of orange cloth between two glasses bound with binding tape paper ribbon, and set into the aforesaid opening.

There are some mighty valuable hints that you cannot afford to overlook given in another booklet issued by Eastman called "Enlargements, a Booklet of Suggestions for the Professional," which, like the other one referred to, is gratis.

I hope I have made myself clear enough to enable some who have read this article to profit by my experience, and much pleasure may be derived from "A Home Made Enlarging Machine."

NARCISSUS. By CARL RAU.

What Beauty Is

When the spirit of man perceives a unity in things, a working together of parts, there beauty exists. It resides in the synthesis of details to the end of shaping a complete whole. This perception, this synthesis, is a function of the human mind. Beauty is not in the landscape, but in the intelligence which apprehends it. Evidence of this fundamental truth is the fact that the same landscape is more "beautiful" to one man than to another, or to a third, perhaps is not beautiful at all. It is only as the individual perceives a relation among the parts resulting in a total unity that the object becomes beautiful for him.—Carlton Noyes.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, MARCH, 1910. No. 3

Please Send In That Coupon

Will you please look up that ballot in the front part of this magazine, comply with the few simple requirements, and send it in? When a number of our advertisers offer to send a prize, in the case of their advertisement receiving the most votes for first place, they expect, in return, an expression of opinion on the subject from a good proportion of our readers. So, kindly let us have your vote. Do not be backward. Show your appreciation. Your opinion is as good as that of the next man. We do not want literary effusions; we do not care if the spelling is all wrong. We do want an expression of opinion from every one of our readers. Please.

The Next Inter-Mountain Convention

The Third Annual Convention of the Inter-Mountain Photographers' Association will be held April fourth to seventh, inclusive, four days, at Ogden, Utah. The officers are from the same enthusiastic, energetic set of men who have made the two previous conventions so successful, and the coming one will have the added advantage of their experience in the past. There is a large list of prizes, open both to members and the world. Some very attractive numbers in the way of talks and demonstrations have already been secured, with more to be arranged. Every photographer in Colorado, Idaho, Nevada, Utah, and Wyoming should make it a point to attend. Correspondence regarding anything connected with the convention should be addressed to J. C. Cooley, Secretary-Treasurer, 421 Main Street, Salt Lake City, Utah.

Mr. Steadman In San Francisco

We have had Mr. Steadman with us for the past few weeks, and trust that we may have him here for an unlimited stay. He gave, on Friday evening and Saturday afternoon in the first week in February, demonstrations at the rooms of the California Camera Club. A large number of members and their friends were in attendance on both occasions, and all were enthusiastic on the point of Mr. Steadman being a past master in home portraiture. The exposures made on Friday evening were by the light from four ordinary tungsten incandescent electric lights, and all proved most successful as examples of various styles of lighting, despite the fact that he had never before attempted portraiture under such conditions. A large arc light was available, but he preferred to use such lights as the members could arrange in their own homes. Saturday afternoon the exposures were made

by the window in the extreme end of the large assembly room, the most unsatisfactory of the many available, because another building is but a few feet distant and parallel therewith, and a third building at right angles cut off nearly all north light. The day was partially cloudy, adding to the difficulty. Despite this fact, the negatives, developed in the presence of the members, were remarkably fine. All those present were deeply impressed with the simplicity and accuracy of Mr. Steadman's method of timing the exposures, as well as with his convenient plan of focusing without recourse to the ground glass during any part of the work. It is hoped that Mr. Steadman may be induced to prolong his stay in San Francisco, as a number of the members are desirous of forming a class and availing themselves of his instructions.

The Outlook Assuring

A note from our good friend, H. Snowden Ward, of England, now closing a most successful engagement for a series of lectures in Eastern cities, contained the following gratifying bits of information, just too late for our last issue He says: "A Salon Club has been formed to hold the London Salon of 1910; the membership list, at this early date, including the names of such men as J. H. Anderson, A. H. Blake, M. A., Mr. and Mrs. Will A. Cadby, Reginald W. Craigie, Charles Emanuel, Charles Job, Alexander Keighley, and J. B. B. Wellington. All these are from among the members of the Linked Ring, while still others have promised work for its exhibitions. The Linked Ring has decided not to hold a Salon this year, although a few of the members propose to hold, in some of the smaller galleries, exhibitions of one or two men's work; probably in the spring."

"A number of pictorialists, not members of the Linked Ring, have also joined the Salon Club; and the new club is assured of the active sympathy of such workers as Yarnall Abbott, Sidney Carter, Robert Demachy, Rudolph Duhrkoop, the brothers Hofmeister, Mortimer-Lamb, Paul Pichier, and C. Puyo. Their effort will be to hold an exhibition of purely pictorial photography along the most catholic lines. I think it means a real effort to give a fair and a fully representative show to all comers."

Art Must Be Unlabored

In all the highest expressions of art the element of exertion is transcended, and our highest ideals cannot be realized while yet the irksome sense of toil remains.

Age after age the race has sought to voice its noblest sense of beauty through such forms of unlabored and joyous expression as are the rightful resources of all great art.

Great poems and paintings never give the impression that they have been laboriously constructed, for in them all the means employed are simple and their manipulation by the master is easy. They bear no marks of dull and fretful drudgery.—John C. Sherman.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

MOONLIGHT VERSUS DAYLIGHT.

Occasionally we see side by side on the same wall of a picture gallery a picture representing a sunlit landscape and another representing a moonlight landscape. The two pictures are both illuminated by the same light as we thus see them. Frequently they very adequately suggest impressions of the scenes depicted. Now we know that there is an enormous difference in nature between midsummer mid-day sunshine and midnight midwinter moonlight. Yet in both instances the artist would be limited to the same white and black pigments. It may be profitable for the day as well as the night photographer to consider how this comes about, as in like manner they may at some time be preparing sunlit and moonlit landscapes for the same exhibition gallery.

Here, as in many other branches of pictorial work, the scientist can give us fundamental facts and set our steps in the right direction. Wollaston, by balancing sun and moon light against a standard artificial light, found the sun's light to be seven hundred thousand times that of a bright, full moon. Other investigators found that white paper in direct sunshine is only one one hundred thousandth as bright as the sun's disc, whereas the moon's disc is only about one-fifth that of sunlit white paper.

Now in a well-lit room or picture gallery the light is probably one-twentieth to one-fortieth that of open-air sunlight.

Leaving out of consideration any attempt at representing the sun's disc, let us imagine our daylight picture to have as its highest light a figure in white drapery. This will probably reflect about two-thirds or one-half the incident sunlight. If white paper be used for this, when seen in the gallery it will have only one-twentieth of the actual luminosity of the garment itself in direct sunshine. Whereas, supposing the moon's disc to be included in the night picture, the same white paper will be some five times too white. Thus we see at once that our highest lights in either of the two pictures are not literally transcripts.

We next turn to the dark end of the scale. Helmholtz found that lampblack in a good light reflected about one one-hundredth of the light reflected by white paper. We thus have a practical range of one hundred to one, or, according to other investigators, one hundred and thirty to one.

Now every photographer well knows that when he has been working in blazing sunshine and goes into his dark-room, he sees little or nothing for a few minutes beyond his red lamp, and perhaps a white porcelain dish close to the lamp. The same thing would happen if he could suddenly pass from a sunlit to a moonlit landscape. But when the eye has got accustomed to the dim light of night, he would then see many details previously unseen. If now he passed from the dim light out into brilliant sunshine, the glare would prevent him seeing many things which presently would be easily perceived. The same so-called "fatigue phenomena" have similar phases in our hearing, tasting, smelling, and music sensations.

According to scientific investigators, the light of the full moon is about equal to that of a standard candle at a distance of ten to twelve feet. Suppose now that we are in a room with an open window, looking upon a marble statue in moonlight, and that behind us, ten or twelve feet away, is placed a candle, and that by the side of the window we have a similar statuette in marble, which is illuminated only by the candle light, then the lights and shades of the candle-lit and moonlit statue should be equal.

Thus we see that the ordinary light of a gallery is vastly different both from that of brilliant sunlight and moonlight. How, then, must the artist proceed to render these two scenes so that they may convey satisfactory impressions under a set of conditions different from both? The answer is supplied by the scientist. A certain "law"

was formulated by Weber, and elaborated by Fechner, which tells us that if a sensation increases in arithmetical series, the stimulus increases in geometric series.

We may put this in another way by saying that differences of light and shade will appear equally distinct if they each and all are viewed in the same lights, for they are reflecting proportionate quantities of the incident light.

In a very bright light, small differences of light appear equally bright, and in a feeble light, small differences of darkness appear equally dark.

Consequently, an artist desiring to convey an impression of brilliant illumination keeps his picture light generally, and merges together finer differences of light and shade towards the light end of the scale, and avoids the use of any large or strongly pronounced darks. Similarly, but conversely, the moonlight painter keeps his picture dark generally, merging together the darkest tones, and uses sparingly the very lightest notes of his scale for those parts which represent the moon, and its reflections in water or polished surfaces of metal, leaves, etc.

From the experiments of Aubert and others, it would appear that in the feeble light of an ordinary living room we are only able to see some sixty notes or steps between black and white, while in extra strong light we may see three times this number, that is, we find our light and shade discrimination sense to be trebled according to viewing conditions.

Thus we find some explanation of the well-known fact that black and white pictures look "somehow different" when seen on the walls of our living rooms and on the walls of a gallery with strong top light.

To follow this line of thought would take me beyond the scope of this note. Turning now to the consideration of the artificial illumination of buildings, street scenes, figures, and outdoor subjects by means of one or more street lamps, it will be seen that here we have a state of affairs somewhat different from brilliant sun and soft moon light, but yet closely related to the latter. In fact, such a lamp-lit scene may be compared with one where, instead of one moon, we had several moons scattered about and near at hand. So that while the light is increased in strength, it is not so much scattered by miles of intervening atmosphere as is the case even on what we call a clear night.

Finally, it must suffice to mention that with artificial lights, which we seldom can entirely avoid showing in our pictures, we have to take into account two phenomena often lost sight of in this connection, irradiation and the lateral spread of the image in the film; while, of course, we are all familiar with such technical questions as halation, reversal, and the loss of image, due to insufficient exposure.

But possibly enough has been said to afford points for a lively and profitable discussion and comparison of personal experiences.

Mr. Lambert desires to acknowledge the assistance gained from the writings of Helmholtz, Ladd, Abney, Michael Foster, Landois and Sterling, Grant Allen, Ruskin, and others, in the preparation of his paper. —Rev. F. C. Lambert in "Amateur Photography."

GELATINE RELIEFS BY CONTRACTION.

On another page we give a paper by Professor Namias on a property of bichromated gelatine that has hitherto passed unnoticed. It is that the film, after exposure to light, undergoes such a change that it is materially affected by a dry heat: the parts that have been exposed contract to a less extent than do those that have been protected from it, so that when the film has been exposed, say, under a negative and is afterwards subjected to heat alone an image in more or less relief is obtained. It is well known that gelatine, whether bichromated or not, contracts greatly when subjected to heat, but so far as we call to mind it has not before been pointed out, in the case of bichromated gelatine, that contraction is retarded by the light's action. It would seem from what Professor Namias says that this novel property might be turned to useful account in the production of gelatine reliefs for different purposes. If so, it will be less troublesome to work than some of the well-known methods now in use. The author of the paper says that the relief obtainable by his process is not so high as that got by the swelled gelatine method, but for some purposes a very high relief is not at all

necessary. The process seems simplicity itself. A metal plate is coated with a thick film of bichromated gelatine, and dried. It is then printed, and afterwards subjected to a tolerably high temperature, when those portions that have been more or less protected by the negative contract to a greater extent than the others, and so an image in relief is obtained. The presence of moisture in the "dry" film is an essential in the working of the process, and this the author of the paper ensures by the addition of glycerine to the gelatine solution with which the metal plates are coated. There is one point that occurs to us in reading the instructions for working the process. Professor Namias directs that, after the plates are sensitised, they should be put away to dry spontaneously. In the case of the thick film of gelatine given in the formula, which film is sensitised by soaking it for fifteen minutes in a tolerably strong solution of the bichromate of ammonia, it will take an unusually long time to dry at this time of year. Such a film as this is (in thickness and condition) very analogous to one for the Woodburytype process, and in the protracted drying would become quite insoluble in warm water, and useless. It would be interesting to know if a film dried so that it becomes insoluble in warm water has its power of contraction by heat similarly affected. Professor Namias' process will doubtless receive attention by those interested in bichromated gelatine photography, for there is certainly some novelty in it.—"British Journal of Photography."

RESTORING OLD BROMIDE PAPER.

Probably all photographers, writes Mr. A. H. Garner in "The Amateur Photographer and Photographic News," experience from time to time the annoyance of finding that their stock of bromide paper, or part of it, has gone stale, and gives fogged, unhealthy-looking prints, which are not improved materially by any tinkering with the exposure and development. The following is a quick and easy method of restoration: Mix a weak bath of potassium permanganate, and acidify this with sulphuric acid. Soak the paper in this for a minute, rinse, and transfer to a weak bath of sodium sulphite, leave for another minute, rinse, and make the exposure. The image will develop up clear and strong without a trace of fog. In fact, fog seems difficult to get in the developer.

Strength of solutions does not seem to be a matter of great moment, but in order to give the method a definite basis the following is suggested as suitable:

First Bath.

Potassium permanganate..	5 grains
Sulphuric acid	30 minims
Water	10 ounces

Second Bath.

Soda sulphite	20 grains
Water	1 ounce

It is necessary to mention that this preliminary treatment reduces the speed of the paper, so that a test exposure will be necessary. A fast bromide paper will require perhaps twice as much exposure, a slower one, probably less than twice as much, as the untreated paper. A trial slip soon determines the best exposure.

LINE DRAWINGS FROM PHOTOGRAPHS.

A very simple method of making these, given by W. Gamble in his book, "Line Photo-engraving," is to make the print on ferro-prussiate paper, such as is used for engineers' blue prints. This, after exposure under the negative, only requires washing in water to "fix" or make it permanent. After the drawing has been made, with a pen and indian ink, the whole of the blue image can be removed by immersion in water containing a little washing soda. If the line drawing is to be photographed, there is no need to remove the blue image at all, as the blue comes out quite white, and only the black ink lines on it will show in the negative.—"Photography and Focus."

DEVELOPMENT.

Three months ago I gave a synopsis of recent writings on the above subject, with a full report of the use of acid amidol. This latter subject has brought "Camera Craft" much correspondence and expressions of great satisfaction with results obtained by its use. The formula called for acid sulphite lye, which in France is commercially obtainable, but in this country seems rarely carried by dealers. A formula was given for making it by the ad-

dition of sulphuric acid to sodium sulphite and water, which should then yield a forty per cent. solution. My own experience is that a solution so made promptly crystallizes. I obtained a workable solution by diluting to ten per cent. and modifying the quantity in the formula accordingly. "The British Journal of Photography" has an article on the equivalence of acid sulphite lye with potassium metabisulphite, and finds that a twenty-four per cent. solution of the latter is equal to the former, and may be used in the place of the lye. I think most workers will decidedly prefer this to the unpleasantness of adding sulphuric acid to sodium sulphite. In the same article our contemporary publishes the Underberg formula so modified, together with their own variant. It is as follows:

	Underberg's Formula.			B. J.P.
	Hard	Normal	Soft	Formula
Diamidophenol (Amidol)	25 grains	25 grains	10 grains	20 grains
Sodium sulphite.....	160 grains	300 grains	120 grains	240 grains
Potassium metabisulphite	117 grains	62 grains	2 grains	30 grains
Potassium bromide.....	25 grains	13 grains	4 grains	2½ grains
Water	10 ounces	10 ounces	10 ounces	10 ounces

ENLARGING IN ONE DIRECTION ONLY.

To the photographer who wishes to record his impressions, writes H. Wild in "Photography and Focus," rather than to make accurate diagrams of the details, the lens image is often very disappointing. Places that impress by their height do not seem high enough, and big things, though they may take up a good part of the negative, do not give the idea of bigness. Much may be done by a careful choice of point of view and by suitable atmospheric conditions, but even then we often wish we had the power to stretch the negative, or rather, the resulting print, higher or wider. I have tried several ways of getting this effect, but without much success until quite lately, but I think I have at last found a method that promises well. I have not had time to experiment much as yet, but the results obtained show that the method is at any rate workable.

The apparatus for "stretching" prints in this way only requires one article not usually found in the photographer's outfit, and that is a convex mirror with a cylindrical curvature. Mine is a very old one, and measures about nine inches by seven inches, with a curvature of about three-quarters inch in the nine inches. For the rest, an enlarging lantern and a printing frame as large as, or larger than, the required print complete the equipment.

The negative is inserted in the carrier of the lantern, and all arranged as if for ordinary enlarging, except that the convex mirror is placed in the path of the rays at an angle of about forty-five degrees, and the printing frame at an angle of forty-five degrees with the mirror, and at ninety degrees with the condenser. I find it best to keep the mirror and frame as close as possible at one end. It will be found necessary to stop down to about f-22 or f-32 to get good definition, but with incandescent gas for the illuminant the exposures are not excessive.

The best way of working is to arrange the mirror and the printing frame (which should have a piece of clear glass, backed with a piece of white paper, in it, on which to focus) at about their respective angles on a piece of board, say a small drawing-board. This is then moved backward and forward in the path of the rays from the lantern until the image is the desired size. It is then focussed as sharply as possible at full aperture, and the lens stopped down until the definition is even all over. The lens is capped, a piece of bromide paper put in the frame in place of the white paper used for focussing, and the exposure made.

The illustrations accompanying the above article show a most satisfactory realization of the workers' intention. It will be remembered by some that many years ago I reported a method of obtaining the same end by the interposition of a cylindrical lens which, according to the direction of its axis, would heighten or flatten the lines of the picture. It has

occurred to me that a slight use of such a method would be excellent in idealising a portrait where the owner's features need improvement in one or the other direction. Much, of course, can be got from relative position of subject and lens, but more this way.

BROMIDE TONING.

I have two new processes to report. D. P. R. in "Amateur Photographer," recommends the following:

Sepia tones tending towards violet can be obtained by a modification of the sulphide toning process, the colors produced being somewhat similar to those of printing-out paper, treated with the combined toning and fixing bath.

The bleaching solution should be made up as follows:

Water	4 ounces
Pot. ferricyanide (ten per cent solution)	1 ounce
Pot. bromide (ten per cent solution)	1 ounce
Ammonia	80 drops

Bleach the prints in this bath, then wash them well, and finally put them in the sulphuration bath as under:

Sodium sulphide	20 grains
Water	4 ounces
Pot. oxalate (ten per cent solution)	1 ounce

Another method is to bleach the prints in a solution as follows:

Water	4 ounces
Pot. ferricyanide	48 grains
Pot. bromide (ten per cent solution)	5 ounces
Pot. oxalate (ten per cent solution)	10 ounces

The sulphuration bath is made up by adding to four ounces of a one per cent. solution of sodium sulphide one ounce of a solution of potassium sulphocyanide of the same strength.

The other process is reported in "Photography" as follows:

Messrs. E. Harold Ridler and A. Stone, at the Willesden Polytechnic Photographic Society, showed some prints with fine sepia and black tones, obtained in the following way. The print was bleached in:

Pot. bichromate (ten per cent solution)	100 minims
Hydrochloric acid	5 minims
Water	1 ounce

After bleaching it was placed in a one per cent. solution of potassium metabisulphite until the yellow stain was eliminated, and was then immersed in a one per cent. solution of potassium metabisulphite, to each ounce of which ten minims of hydrochloric acid had been added, and placed in the sun until the print reached a plum color. At this stage the shadows appeared clogged. The print is then placed in a solution containing one grain of sodium sulphide to the ounce of water. In this it clears, a fine sepia or warm black, with much of the appearance of a carbon print, resulting.

NOTES ON REDUCERS.

That much used and abused re-agent, Farmer's reducer, which, whatever its faults, is probably in greater use than any other photographic solution, suffers, as is well known, from the fact that the ferricyanide stock solution does not keep well, particularly when exposed to the light. While one may direct that it should be kept in the dark, or in a stone jar, the fact remains that nineteen out of twenty photographers will still go on storing it in the ordinary way, and, of course, in a commercial establishment it is very difficult to "keep track" of such precautions as these. But the ferricyanide solution can be made to preserve its properties very much longer by mixing with it, at the time of making it up, some ordinary common salt to the extent of about twice its weight. Potassium bromide has a similar effect, but, of course, is much more expensive. The salt, as far as we can discover, has no visible effect upon the action of the reducer.

An alternative to the use of the hypo-ferricyanide or Farmer's reducer is one which we occasionally employ on account of its greater freedom from stain, though the highly poisonous nature of one constituent is certainly an objection to it. Still, for giving a slight degree of reduction to a bromide print or to a dry plate, particularly of line subjects, it is one which may be usefully kept in mind. It consists simply of a ten per cent. solution of potassium ferricyanide added in small doses as required to a weak mixture, about one per cent., of potassium cyanide. There is no need to use the pure variety of the cyanide, that known as

thirty per cent. cyanide cake and costing about twenty-five cents a pound will answer the purpose. It has also the further advantage that the mixture appears to retain its working properties for a much longer period than the hypo-ferricyanide mixture. On the other hand, extra caution must be used in letting the fingers come in contact with it, or in hanging over dishes in which it lies, since even such weak cyanide solution evolves a slight cyanide odor which, in the case of some persons, gives rise to headache.—"British Journal of Photography."

Club News and Notes

Club Secretaries and others will oblige by giving us reports for this Department

SCRANTON Y. M. C. A. CAMERA CLUB.

Under date of January thirty-first a notice was sent out, reading as follows:

"The next meeting of those interested in camera work will be held at eight o'clock on Wednesday evening, February second, in the Association parlor. Mr. Blackburn will be there and give some splendid demonstrations in three color work, explaining any of the mysteries pertaining thereto. It would be most gratifying indeed to have the parlor well filled on that evening in appreciation of the splendid work Mr. Blackburn is doing in promoting this work among amateur photographers. May we not expect you and your friends? Some things pertaining to the formation of a permanent organization were left over from the last meeting. These will be given attention."

Mr. Blackburn's demonstration was a success in every way and proved of the highest interest to those in attendance. A permanent Camera Club was organized, and Mr. Blackburn made president thereof.

MISSOURI CAMERA CLUB.

The Missouri Camera Club of St. Louis has enjoyed an active fall and winter. Establishment in new quarters with greater facilities for the members has resulted in increased interest. The Club is now fully equipped with a studio and portrait camera, dark room with enlarging lantern, and a stereopticon.

One outing in the fall, including a cross-country tramp, was somewhat marred by unsuitable weather; but the presence of good fellowship compensated in full measure for any lack of photographic results. Interest in lantern slide work is on the increase. During the past two months we have enjoyed viewing the work, through exchange of slides, of the Wisconsin and Toledo Clubs. Arrangements have been made for exchange with the Akron Club, and we hope to continue the good work through Trinidad, New York, and Chicago.

The annual exhibit of the Club was on view throughout the week of January seventeenth, and attracted wide-spread attention. The display consisted of ninety-two frames and was universally conceded to be the best of the five annual exhibits held by the Club. Several additions to the membership list have resulted, and more are expected. We have been allotted the Sixth American Salon for the week of March fifth. The exhibit will be held, as in previous years, in the gallery of the Artists' Guild, and we fully expect a continuation of the interest manifested by the public in the past.

The Club looks forward to an active year, and most cordially repeats its invitation to all fellow workers to come in and join with us. Rooms are located in the Euclid Building, McPherson and Euclid Avenues, St. Louis.

W. E. ROLFE, Vice-President.

TORONTO CAMERA CLUB.

That enthusiastic body of camera workers, the Toronto Camera Club, will hold their next Annual Salon, April fourth to ninth inclusive. The prospectus will be issued long before this reaches our readers; and every photographer having Salon inclinations should send for a copy. Make the request to Hugh Neilsen, Secretary-Treasurer, Toronto Camera Club, 2 Gould Street, Toronto, Canada.

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

THOSE BROWN SPOTS.

There isn't a week, sometimes not even a rest of a day, allowed me without some one either writing to ask about brown or yellow spots on their developing-paper prints, or sending me samples of such prints showing these spots. This, of course, I do not find objectionable, because I am always glad to help and always recognize very fully how hard it is to understand these things if one does not know the cause. I am mentioning the frequency with which these come to my hand as an excuse for once more explaining the trouble. It is this way: The print is developed in a solution that oxidizes very rapidly if spread out thin and exposed to the air. Just wet your finger in the developer, draw a streak across the back of a print, and expose to the air. Then imagine that the paper is coated with silver and gelatine and you will understand why the spot also goes dark as well as stained the color of the oxidized developer. And that is just what happens when you put the print out of the developer into the fixing bath. An air bubble adheres to the surface of the print or a large one is confined beneath it as it lies near the top of the fixing bath. The bubble prevents the fixing bath from diluting and rendering inactive the developer at that point and the air that it contains provides the necessary oxidization. Development at that point continues and, in addition, oxidization of the developer stains the film and possibly the paper below. If the print is one that was well exposed and development not carried to full completion, the spot will darken by the further development at that point. About the same thing happens if the print is allowed to rise above the surface of the fixing bath and become exposed to the air before the fixing bath has taken the place of the developer remaining in the film. One can realize how necessary it is that the developer left in the film upon completion of development should be removed or diluted and rendered inert by the fixing bath at the earliest possible moment if he will but stop and think how easy it is to stain the film by a little too long development of an under-exposed print, as when trying to force out the image. And the conditions, owing to the bulk of the solution and the absence of air, are not nearly so conducive to stains. The remedy lies in rinsing the prints well as they come out of the developer and then sliding them about as they go into the fixing bath so that there is no danger of air bubbles being confined beneath them, or a part being allowed to stick up out of the solution and be exposed to the air.

TRANSPARENCIES IN COLORS.

I saw some window transparencies the other day that were very fine in quality and beautiful as to color. They were made in the following manner: The matt side of ground glass was coated with

Fish glue	560 grains
Beaten white of egg	10 ounces
Water	10 ounces
Bichromate of ammonia	270 grains
Strong ammonia	1 drop

Well mix all together by beating with an egg beater; then allow to stand several hours, and decant off the clear portion. The plate, well cleaned and still damp, is flowed with the solution, which is allowed to run off at the corner. When dry, it is again flowed, the flowing off being done at the opposite corner. When this second coating is dry, the plate is printed under a strong negative, requiring about five minutes in the shade in good, bright weather, longer in dull weather. Washing in cold water completes the operation by dissolving out the unaffected portions of the gelatine. There then remains but the work of coloring the remainder by immersing the whole plate in a suitable alcoholic solution of the desired color. This can be varied by applying the color locally with

a brush. The maker of these transparencies had used only strong line negatives in the production of transparencies for advertising purposes, and it might prove unsatisfactory as a means of producing prints from ordinary negatives. The solution given above will keep in working condition for about ten days. The printing should always be done in the shade and the negative must be strong, or fog will result. A final rinse is required before drying the finished and colored transparency.

INTENSIFYING PLATINUM PRINTS.

A correspondent complains of his non-success with the method advised for intensifying platinum prints with gold, the result, at least in his case, being a rather unpleasant, cold, bluish gray. We advise his trying the following: Dissolve eight grains of formate of soda in ten ounces of water and then add two grains of platinum chloride. This latter can be bought in fifteen-grain tubes, generally sold under the name of platinite. One of these dissolved in fifteen drams of water gives a stock solution, one dram of which contains the grain of chloride called for above. Immerse the prints until the desired intensity is secured, and then wash and dry.

SHARP FOCUSING IN ENLARGING.

A Chicago correspondent, F. W. Langdon, sends a description of a test plate that he uses for obtaining the focus in enlarging. He takes a cleaned negative glass and wraps around it, beginning at one end and going round and round until the other end is reached, some fine, black sewing cotton or silk, keeping the thread about an inch apart at each turn. Then repeat so as to cross the threads. Finally, one side of the plate is coated with a clear varnish or a solution of warm gelatine, so as to have the thread imbedded in the coating on that side; after which the threads on the other side are trimmed away. He finds that this gives much sharper lines, ones that are uniform, and of such a character that it can easily be determined when the plate is in absolute focus. This prepared plate, we might add, is placed in the camera, focused for the desired size, and then removed and the negative from which the enlargement is to be made is inserted. The test plate is of course inserted with the thread-lined side next the lens.

A TEST FOR HYPO.

A correspondent asks us to recommend an easy and reliable test for hypo in his developing paper prints. The following solution, which keeps well, is very trustworthy:

Potassium permanganate ... 1 grain
Potassium carbonate .....10 grains
Water . . ..16 ounces

Lift a print out of the last wash water and allow the water to drain from it into a graduate; then add a drop or two of the above. If any hypo is present, the pinkish tint will change to a dirty greenish yellow.

THE PORTRAIT ATTACHMENT IN ENLARGING.

A valued correspondent, Manuel Trujillo, of Mexico City, tells me, in a recent letter, how one of those difficulties that are always arising was overcome by him a few days before. His camera, a 4x5, happens to have a bellows extension that barely permits him to focus fairly near objects, the bellows extension being but about an inch more than the focal length of the lens. Wishing to make some enlargements, using the same camera and lens, he found that the lens would have to be racked out about half an inch further than in focusing a fairly near object in order to get an enlargement of from five to six diameters. An enlargement of ten or twelve diameters was possible, but he wanted something less. Placing one of the cheap portrait attachments in position he found that the sharp focusing of a four to six times enlargement could be easily accomplished. Thinking the hint might be of value to some of our other readers he kindly mentioned the fact in his last letter to us. We only wish that more of our subscribers would be as kind in mentioning little devices of a like nature which they find serviceable in overcoming the many difficulties which are constantly arising in their work.

International Photographic Association

CHIEF ALBUM DIRECTOR'S REPORT.

Canadian Divison: Has been circulating Special Album No. 3. New Album No. 1 is now ready to be routed to the members. Canadian members should send prints to Mr. Foster so as to be represented in the route list of the next Canadian Album.

Indiana Division: Album No. 1 is still in circulation, but will shortly be sent to the Clearing House to be exchanged for another State album. Mr. Bishop wants more prints from the Indiana members in order to make No. 2 album a worthy representative of their State.

Massachusetts Division: The new Director, Mr. Mardon, has the new No. 1 Album nearly ready for starting. He asks all Massachusetts members to send him prints at once for the No. 2 Album.

Mississippi Division: Another new Director, and in a State with a very small membership, will shortly get out the No. 1 Album. Mr. Ross deserves great credit.

Missouri Division: Album No. 1 has just been started out with nineteen pictures therein. The members in this State are not giving their Album Director the encouragement he deserves; and I hope that each of the Missouri members will early send him one or two prints for Album No. 2. Remember, "We are from Missouri."

New Jersey Division: Mr. Albee is working on Album No. 1, and only asks the co-operation of the members.

New York Division: Album No. 1 has been sent in, and Ohio No. 8 sent in exchange. Album No. 2 is now circulating among the members. Keep your Director supplied with prints, and he will get the albums out regularly.

Kentucky Division: Album No. 1 has been sent to the Clearing House, and Illinois No. 1 sent in return. No. 2 is being circulated. Mr. Truman plans to get out a State album every other month, and to route an exchange album in the alternate months. Be sure and keep him supplied with some of your best prints.

Ohio Division: Ohio Album No. 12 has just started over its route. The Director requests the members to send in their prints for No. 13 at once.

Texas Division: Mr. Reeves has got out two albums during the past winter, and is at work on the third. The Texas members who are not represented in their State Album are making a mistake by not getting in touch with the work of their hustling Album Director.

Your Chief Album Director is waiting a report from the following States: Alabama, Connecticut, Florida, Iowa, Kansas, Maryland, Michigan, Minnesota, Nebraska, North Dakota, South Dakota, Pennsylvania, Oregon and Utah.

There is some excuse for some of the Directors who are located in States having a small membership, but this is not the case with Iowa, Kansas, Michigan, Pennsylvania, and some others. If any of the Directors need an album to circulate while they are getting out one of their own, I would be pleased to accommodate, as several of the older State Albums are available.

Respectfully,
J. H. WINCHELL,
Chief Album Director.

THE STEREO DIVISION.

The Stereo Director, Mr. Wilson, asks us to say that he has a supply of blank forms, one of which is intended to accompany each stereo slide as it is sent out in a set. He is also prepared to return all slides that have been returned from the traveling sets during the past year. Members will kindly write him enclosing five cents for the postage on the return of their slides; and, in any case, write and enclose a two-cent stamp for postage on a supply of the blank forms for the titles and data concerning the new slides which

they may be sending in the future. Mr. Wilson reports five new members of the Stereo Division, and all the old members continuing the work.

DEATH OF MR. KIRKLAND.

The old members will be pained to learn of the death of George C. Kirkland, so long the President of our Association, when it was known as the International Photographic Exchange. In fact, Mr. Kirkland was President of one of the two societies from which the original I. P. E. was formed. Our first knowledge of his death came in the form of a clipping from the Denver papers of February 14th, kindly sent by Mr. Hinman. It reads as follows:

> KIRKLAND—The funeral of George C. Kirkland will take place Tuesday afternoon at 2 o'clock from Horan's funeral chapel, 1527 Cleveland Place. Interment Fairmount Cemetery. Members of Denver Camp No. 1, W. of W.; Sons of Colorado; Denver Lodge No. 5 A. F. and A. M., and Maccabees of the World, Court No. 3, invited to attend.

It is needless for us to dwell upon the sterling good worth of one so well known through his work to so large a number of our members. He was beloved by all who knew him, and the enthusiasm which he displayed in the furtherance of the aims of our society did much to place it in the enviable position which it now holds.

NEW MEMBERS.

2284—H. P. Smith, Adams Mills, Ohio.
Up to 6½x8½, on developing and bromide papers, of landscapes, genres and children; for child poses and miscellaneous views. Class 1.

2285—C. A. Holman, Dredge No. 83, Gatum, Canal Zone, Panama.
Class 2.

2286—Anth. P. Fabrick, Box 785, Manhattan, Mont.
Class 2.

2287—H. T. Johnston, Box 548, Delta, Colo.
Class 2.

2288—George A. Price, R. F. D. No. 1, Box 70, Summit, Ill.
Class 2.

2289—Frank Herbeck, Bagby, Cal.
Class 2.

2290—Chas. Hanson, 953 Morquette St., Racine, Wis.
Class 2.

2291—W. C. Palmer, 1426 College Ave., Racine, Wis.
Class 3.

2292—J. R. Dishington, 612 12th St., Racine, Wis.
Class 3.

2293—L. W. Miller, 1231 Milwaukee Ave., Racine, Wis.
Class 2.

2294—Hans Simons, Manderson, S. Dak
Class 2.

2295—Irwin G. Dillon, Kyle, S. Dak.
Class 2.

2296—Warner H. Clapp, Culebra, Canal Zone, Panama.
Class 3.

2297—H. E. Honnigfort, 817 South O St., Tacoma, Wash.
3¼x5½, developing paper, of landscapes and seascapes; for similar views. Class 1.

2298—Erwin E. Schroder, Davenport, Iowa.
Class 2.

2299—George L. Brady, 164 Main St., Petaluma, Cal.
Class 3.

2300—C. H. Wilson, D. D. S., 654 N. 15th St., Philadelphia, Pa.
Class 2.

2301—Kenneth B. Norton, Box 267, Osceola Mills, Pa.
2½x4¼, mostly developing paper, with self-toning and blue print papers, of animals, flowers and landscapes; for the same. Class 1.

2302—Dr. W. J. Cameron, 522 Flynn St., Des Moines, Iowa.
4x5, printing-out and developing papers, of landscapes and general photography; for scenery and historic views. Class 1.

2303—A. E. Wilson, Box 129, McLeansboro, Ill.
2½x4¼, 3¼x5½, and 4x5, on developing paper, of views and nature pictures; for nature pictures. Class 1.

2304—O. L. Moffitt, 227 N. Capitol St., Iowa City, Iowa.
Class 2.

2305—W. S. Marion, Route 1, Spangle, Wash.
4x5 to 6x8, developing and self-toning papers, of landscapes and genre; for same. Class 1.

2306—D. K. Kane, London Mills, Ill.
2½x4¼, developing paper, of scenery, miscellaneous portraits, busts and baby pictures; for reasonably good prints of same. Class 1.

2307—Miss Pearl Fahrney, L. M. L. A., Hastings, Neb.
Class 2.

2308—J. C. Cottrell, Kingsley, Iowa.
3¼x5½, developing and printing-out papers, mostly out-door views, especially landscapes, birds, animals, and portraits; for similar pictures of foreign subjects, also portraits and interiors. Class 1.

2309—A. A. Richardson, Bemidji, Minn.
Up to 5x16 and 8x10, developing paper, for post cards, unusual views and occurrences, Indians, fancy draped subjects, and genre. Class 1.

2310—Linnaeus Allen, Floral Park, N. Y.
Class 2.

2311—L. J. Wright, Box 635, St. Johns, Ore.
4x5, and post cards, developing paper, of landscapes, views, flowers, portraits, park scenes, etc.; for anything of interest. Class 1.

2312—James W. Pace, Room 32, Custom House, Memphis, Tenn.
Exchange notice later.

2313—Miss Emily Winslow, 131 Langdon St., Madison, Wis.
Class 3.

2314—Arthur Z. Lytle, 1471 Crotona Place, Bronx Borough, New York, N. Y.
Class 2.

2315—E. O. Hoffman, North Liberty, Ind.
Class 3.

2316—Roscoe H. Fuller, R. F. D. No. 2, Box 71, Holmen, Wis.
5x7, 4x5, and post cards, developing paper, of scenery, etc.; for post cards and other views. Class 1.

2317—A. J. Hogie, Astoria, S. Dak.
Class 2.

2318—Fred R. Kelly, Box 242, Hagersville, Ont., Canada.
Post cards. Class 1.

2319—Verchi Burtch, Branchport, N. Y.
Post cards, of birds, nests and eggs, landscapes and nature studies; for same. Class 1.

2320—Harry C. Gibson, 816 Humboldt Ave., Detroit, Mich.
3¼x5½, developing paper, of landscapes; for anything interesting or artistic prints. Class 1.

2321—Robt. F. Wittbecker, Lock Box 79, Lansing, Iowa.
Post cards, and up to 5x7, developing paper, of landscapes, river views, snow scenes and moonlight views; for similar work. Class 1.

2322—D. R. Langhorn, 329 N. Maple St., Sycamore, Ill.
3¼x5½ and 4x5, developing paper, of outdoor views, landscapes, etc.; for landscapes, sea scenes and mountain scenery. Speed work desired, but nothing larger than 5x7. Class 1.

2323—Sigismund Blumann, 3159 Davis St., Fruitvale, Cal.
Class 2.

2324—Terry T. King, 810 W. De Wald, Fort Wayne, Ind.
Class 2.

2325—L. Claud Kenyon, Box 187, Cooper, Tex.
Class 2.

2326—J. Bernard Tighe, care Y. M. C. A., Douglas, Ariz.
3¼x5½, developing and printing-out papers, of landscapes, portraits, animals, flash, interiors, enlargements and artistic pictures; for same, of post card size and enlargements. Class 1.

2327—Horace Sykes, Salem, Ore.
5x7, developing paper and better, of landscapes and portraits; for artistic effects; 5x7 and smaller for same sizes. Class 1.

2328—Lawrence Boyer, R. R. No. 7, Gallatin, Mo.
4x5, developing paper, of views; for post cards of views. Class 1.

2329—Benjamin Phillips, Seiad Valley, Cal.
Class 2.

2330—Walter A. Nelson, Ryegate, Vt.
3¼x5½, developing paper, of landscapes, snow scenes, and country pictures; for the same. Class 1.

2331—Miss M. Meigs, R. F. D. No. 1, Altona, N. Y.
Class 3.

2332—Lovell W. Frost, 109 So. Main St., Middleboro, Mass.
3½x3½, post cards and 4x5, developing paper, of landscapes, waterscapes, boats, buildings and historical, Puerto Rican, and general views, including foreign subjects; for same. Class 1.

2333—John Heff, Jr., Box 212, Hamburg, Iowa.
3¼x4¼ up to 6½x8½, developing and printing-out papers, of landscapes, river views and the like; for the same. Class 1.

2334—Ryell T. Miller, Room 4, I. O. O. F., South Bend, Ind.
4x5, 5x7 and enlargements, developing and bromide papers, of landscapes; for landscapes, seascapes, redwood forest scenes, etc. Class 1.

2335—Clyde Dunton, Mercer, Maine.
Post cards, developing paper; for same. Class 1.

2336—Alfred H. South, No. 6 E. Front St., Media, Pa.
Class 2.

2337—Leonard A. Page, 156 Everett St., East Boston, Mass.
Up to 5x7, and post cards, mostly on developing paper, of points of interest in and around Boston; for mountain scenery, views of waterfalls, and points of interest at large, in post card size only. Class 1.

2338—J. B. Waddill, Tate Springs, Tenn.
4x5 and enlargements to 8x10, developing paper, mostly mountain views and views of fishing and hunting trips here and in Florida, for hunting and fishing scenes, etc. Class 1.

2339—Guy E. Tasker, Box 660, Sioux Rapids, Iowa.
4x5, 5x7 and 8x10, developing paper, of water scenes and landscapes, for the same, and genre. Class 1.

2340—Hubert B. Manring, R. F. D. No. 16, Alexandria, Ind.
5x7, developing paper, of farm views and live stock; for marine views, boats and boat races, and mountain scenery, in 5x7 prints and post cards. Class 1.

2341—J. P. Polk, 40 Montrose Ave., Nashville, Tenn.
Class 3.

2342—Chas. H. Spaugh, Laidlow, Ore.
4x5, 5x7, and post cards, developing paper, of waterfalls, lakes, rivers, landscapes, etc.; for unmounted prints and post cards of anything of interest. Class 1.

2343—C. Morris, care Tandy Flats, Paducah, Ky.
Class 2.

2344—Hans Simons, Manderson, S. Dak.
Class 2.

2345—F. D. Burt, Bennington, Vt.
Class 2.

2346—P. B. Speed, 1503 Pierce Bldg., St. Louis, Mo.
Post cards and 5x7, developing paper, of miscellaneous views; for same, but no buildings; post cards only. Class 1.

RENEWALS.

317X—J. C. Hegarty, Utahville, Pa.
4x5 to 6½x8½, developing paper, of landscapes and historical subjects; for same. Class 1.

555—William Morey, Box 785, G. P. O., Sydney, N. S. W., Australia.
Stereos mostly, on printing-out paper, of Australian scenery and Sydney views, principally. Desires scenery or city views from the country in which his correspondents reside. Wants no portraits, pictures of purely personal interest, or the like. Wants only good work, and will send out only good work himself. Wants not more than three prints at a time, but is willing to correspond quite freely if the member corresponding does not desire to rush things or flood him with prints. Prefers stereos. Mr. Morey says that if there are any of his old friends whom he owes prints, he will gladly make returns if they will drop him a line. Class 2, nominally.

1692—E. L. Bickford, First National Bank, Napa, Cal.
Class 2.

1714X—H. A. Nerison, Westby, Wis.
Post cards only. Class 1.

1733—A. C. Ames, Peninsula, Ohio.
Up to 5x7, developing paper, for post cards. Class 1.

1790—N. B. Schiedel, 249 12th St., Brandon, Man., Canada.
Post cards, and up to 8x10, of snow scenes mainly. Prefer post card exchanges. Class 1.

1795X—Harry Bagly, Box 533, Burlington, Wash.
Post cards, developing and printing-out papers, of bits of Western landscapes and some water scenery; for post cards of anything of interest. Would like to get some historical views. Class 1.

1817X—Mrs. L. M. Loomis, Summerland, Cal.
4¼x6½, developing paper, of typical California views; for any good views of general interest, either beautiful or historical. Will exchange good work for good work. Class 1.

CHANGES OF ADDRESS.

961—Wendell G. Corthell, De Land, Fla.
(Was Wollaston, Mass.)

1283—W. O. Brosius, 446 Ross Ave., Wilkinsburg, Pa.
(Was 436 Ross Ave.)

1634—Charles A. Koch, Collbran, Colo.
(Was Mesa, Colo.)

1668—Lynn Smith, Grants Pass, Ore.
(Was Butte, Mont.)

1934—George W. Gage, Box 768, Mobile, Ala.
(Was Pass Christian, Miss.)

2092X—R. L. Greethurst, Lewiston, Minn.
(Was Peterson, Minn.)

2155—Mrs. J. W. Harwood, Medical Lake, Wash.
(Was Creston, Wash.)

2178—C. Timperley, Box 131, Centredale, R. I.
(Was Greystone, R. I.)

CORRECTIONS.

2140X—Cleo L. Bowerize, R. F. D. No. 2, Greenwich, Ohio.
3¼x5½ up to 8x10, developing paper, of landscapes, historical subjects, portraits and animals; for anything along same lines, especially marines and mountain scenery. Class 1 for post cards; Class 2 for prints. Notice in January issue incorrect.

Alaska—P. S. Hunt, Valdez.

Kentucky—Roy J. Sawyer, 1564 Greenup St., Covington.

Our Book Shelves

THE PROCESS YEAR-BOOK 1909-10.

This handsome annual again reaches our desk, this year a little late, but all the more welcome because looked forward to with some anxiety as the delay lengthened. It is, as usual, a complete and comprehensive survey of the graphic arts, particularly those of a reproductive utility. The text is made up of some sixty or more of the most practical articles, all of them by practical workers; over two hundred and fifty handsome illustrations embracing, in addition to the half-tones in from one to five colors, photogravures, steel engravings, Paynetypes, Collotypes, and others; color effects being lavishly supplied. It is a book that no worker in the half-tone and kindred reproductive arts can afford to be without. There is much to interest the photographer, and any lover of pictures will find delight in its pages. It will be sent express prepaid for two dollars and fifty cents by the American publishers, Tennant & Ward, 122 East Twenty-fifth Street, New York. The local firm of Hirsch & Kaiser have a supply and will also fill orders while they last.

"PRACTICAL SUGGESTIONS REGARDING THE SELECTION AND USE OF A PHOTOGRAPHIC EQUIPMENT."

A copy of the new book with the above title has just reached our desk. It is by Austin K. Hanks; and, as the author says in the title page, "Written from actual experience." He also assumes all responsibility for the wealth of fine illustrations which the book contains. As full details as to lens, camera, plate, and everything used in the production of each picture is given, that feature is alone a most valuable one, particularly as these examples of camera work seem to cover everything from focal plane shutter work of exceptional good quality to telephoto work that is very interesting. Mr. Hanks is evidently a painstaking and versatile worker, who is eminently qualified to instruct in an interesting and convincing manner, and the book which he has produced will be found of the greatest value to those who are interested in photography or who may be made so by a clear and logical description of the methods which he has found, and which are proven by his work to be, eminently practical and consistent. The book is handsomely bound and finely printed. The price is one dollar. Every dealer should have it in stock by the time this reaches our readers, and copies can be obtained at one dollar, net, directly from the publisher, Austin K. Hanks, East Orange, New Jersey. The advertisement appears on another page.

"CAMERA WORK" NUMBER TWENTY-NINE.

It is useless trying to describe, in a fitting manner, this handsome quarterly. It is a publication of which every photographer in this country should be proud. If it is approached, even, by any like production devoted to photography in any other country, the fact is kept well concealed. The current issue contains ten beautiful photogravure reproductions of the latest work of George H. Seeley, and four similar reproductions of the wonderful caricatures in black French chalk by Marius de Zayas, whose charm of technique and unusual originality of treatment so captivated those who saw his work at the Photo-Secession Galleries last January. The text portion, as usual, is strong; the leading article being a most illuminating discussion of Mr. Bernard Shaw and one of his recent statements at the London Photographic Salon. "Camera Work" can hardly appeal to all who use the camera; but we are quite sure that it would appeal, and appeal most strongly, to a very large number could they but become acquainted with its message and its methods. Quarterly, six dollars and fifty cents a year. Alfred Stieglitz, 1111 Madison Avenue, New York.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

"HUNTING WILD BIRDS WITH THE CAMERA."

The lecture with the above title, which was to have been given by William L. Finley under the auspices of the California Camera Club, on Friday, February eighteenth, came very near not being presented. The announcement of a lecture by so eminent an authority as the author of "American Birds" had caused an unusual demand for admission cards, and at eight o'clock the hall was packed to the doors. Unfortunately, Mr. Finley was taken severely ill that morning, and could not be present. Late in the afternoon, Mr. LeBreton, one of the directors of the club, realizing how greatly the audience would be disappointed at not seeing Mr. Finley's beautiful collection of bird pictures, went over to Piedmont and obtained Mrs. Finley's permission to show them. A selection of about one hundred and fifty slides was made, and some interesting notes were furnished by Mrs. Finley, who is almost as familiar with bird life as her talented husband.

Mr. LeBreton presented the views to the large audience in a most interesting manner; the beautiful pictures being frequently applauded. A more interesting and unique collection was never shown by the Camera Club. The habits of the birds and their peculiar characteristics were most admirably portrayed. The best pictures were undoubtedly those of the owls and eagles; the remarkable poses of the former were undreamt of by the audience, while some twenty slides pictured the development of the national bird from the egg in the nest to full-fledged development.

The great difficulties and dangers attending the taking of Mr. Finley's wonderful photographs, from tree tops, from marshes defying approach, and from precipitous, overhanging crags, elicited frequent exclamations of surprise from the more timid in the audience. H. T. Bohlman, Mr. Finley's co-worker, was often referred to, and due credit given him for his part in securing the beautiful pictures.

It was through the efforts of Mr. Finley and his associate, Mr. Bohlman, that President Roosevelt in August, 1908, set aside the two largest and most important wild bird reservations in the United States for the protection and preservation of wild fowl. These are Klamath Lake and Malheur Lake Reservations, lying in Northern California and Southern Oregon. Mr. Roosevelt was greatly interested in the wild bird photographs taken by these two naturalists. One of the photographs taken at the sea shore of a gull over the waves, he said was the best thing he had ever seen in wild bird photography. Because of his wide experience in the field with the camera, Mr. Finley was asked to consult with Kermit Roosevelt and give him suggestions as to field work and equipment, before the President and his son left for Africa.

THE STEINHEIL CATALOGUE.

Our readers should make early application for a copy of the Steinheil catalogue of photographic lenses and accessories. It contains some fine pictures, information concerning the manufacture and care of lenses, an explanation of the stop systems of the Paris Congress and the German system according to Dr. Stolze, a table for the rapid determination of distances for object, lens and plate in enlarging and reduction; and, not the least important, information concerning the celebrated Steinheil lenses and accessories. It is supplied on request by Herbert & Huesgen, Sole American Agents, 311 Madison Avenue, New York.

THE NEXT NATIONAL CONVENTION.

The rules and regulations governing exhibits at the next Annual Convention of the Photographers' Association of America, to be held at Milwaukee, are as follows:

(1) Exhibitors are requested not to exceed three prints in their exhibits. There are no other restrictions.

(2) Application for exhibition space must be made to First Vice-President G. W. Harris, 1311 F Street, Northwest, Washington, D. C.

(3) All exhibits must be sent prepaid to G. W. Harris, First Vice-President, Milwaukee, Wisconsin, care of Milwaukee Auditorium, and must reach Milwaukee on or before July eighth, 1910. Any exhibit not having express charges prepaid will not be accepted.

(4) The Association will not be responsible for any loss of, or damage to, pictures in its charge, but special precaution will be taken by the Committee to insure the safe return of all exhibits.

(5) No exhibits shall be removed from the hall until after the close of the Convention. Exhibitors who desire personally to take charge of or remove their exhibit may do so only by permission of G. W. Harris, Chairman of the Hanging Committee.

(6) This exhibition being a complimentary one and the photographs being solicited with the understanding that they are to be returned to the rightful owners, all exhibits will be returned to them intact at the close of the Convention.

CHANGE OF NAME.

We take pleasure in announcing that, on and after the date below, this business, formerly conducted under the name of Taylor, Taylor & Hobson, Ltd., will be continued as The Taylor-Hobson Co.

Cooke Anastigmat Lenses will still be imported from the English factory, and Mr. J. Ronald Taylor will continue the management of the American business as before.

THE TAYLOR-HOBSON CO.,
1135 Broadway, New York.
January 15th, 1910.

VOIGTLANDER & SOHN'S NEW BRANCH.

Notice is being sent to the trade calling attention to a new branch office under the name of Voigtlander & Sohn Optical Works, at 617-631 West Jackson Boulevard, Chicago, Illinois. Here the firm will carry a full line of their celebrated photographic lenses and cameras, together with binoculars, telescopes, microscopes, and other goods of their manufacture. The best of attention will also be given to all kinds of fitting and repair work. The new house, as the New York one, will be under the direct control of the head office at Braunschweig, Germany; this meaning that the same principles will maintain that have made the goods and methods of the firm so favorably known to the trade in the past. Customers east of the Ohio are asked to continue with the New York house, while Central and Western ones will have the advantage of shorter time in dealing with the new branch. No change will be made in the New York branch, except that the accounting department will be removed to Chicago, where all remittances and correspondence pertaining thereto should be sent.

BAKERY, COOKERY, CONFECTIONERY AND PURE FOOD EXHIBITION.

An exhibition will be held at the Auditorium, corner Page and Fillmore Streets, San Francisco, March twenty-first to twenty-sixth, under the auspices of the Cooks' Association of the Pacific Coast, Incorporated, and the Master Bakers of the Pacific Coast.

This exhibition will be of an educational nature and, as there are being offered a great many prizes, it will be very interesting and complete. The committee is sparing no pains or expense towards making it a great success, and they are meeting with all encouragement. Valuable gate prizes will be offered to all those purchasing season tickets. Adults, one dollar; children, twenty-five cents. Further information can be had by applying to the committee's headquarters, Suite 330-332, Pacific Building, this city.

THE "BINGO" BOOKLET.

A neat little price list of the goods manufactured and for sale by the Bingham Company, Binghamton, New York, has just reached our desk. "Bingo" gaslight papers and post cards are very reasonable in price, and the claims made for their quality are such that they should at least be given a trial. Their developers and other photographic chemicals are listed and explained in a modest and convincing way; one strong recommendation being that the contents of their tube preparations are weighed out instead of being measured. We would advise our readers,

both users and dealers, to communicate with the firm and give the goods an opportunity to prove their worth.

EXHIBITION OF PHOTOGRAPHS.

We are in receipt of tickets, one for a musical tea, a season ticket for an exhibition of photographs, and another and larger one in the form of an invitation, the text of which is as follows:

"You are invited to attend the private view of an exhibition of photographs by E. Goldensky and R. T. Dooner, Associates; to be held under the auspices of the Alumni Association of the School of Industrial Art of the Pennsylvania Museum at their rooms, 320 South Broad Street, on the afternoon of February 14th, from four to six o'clock. The exhibition will be open to the public daily, except Sunday, from ten to five o'clock, until February 28th, inclusive. Tea will be served every afternoon from four to five. A musical tea will be given, with Miss Marie Zeckwer, soprano, and Mr. David Griffin, basso, as soloists, at the exhibition on Thursday, February 24th, from four to six."

Something of this kind could be arranged by photographers in other cities; and, as a dignified means of bringing one's work to the attention of the public, a better plan would be hard to devise. Messrs. Goldensky and Dooner can be depended upon to make a display of exceptional quality, and the result of doing so in the above manner can hardly be disappointing.

VALUABLE INFORMATION FREE.

"Troubles—Their Causes and Remedies," is the title of an instructive section in a booklet which the Kilborn Photo Paper Co. will send to our readers upon request. Read their offer in our advertising pages. Most of the troubles experienced by photographers of all classes are due, not to defective materials, but to faulty manipulations. It will be worth your while to write for this booklet.

A FINE SCHOOL CATALOGUE.

One of the new catalogues of the Keystone School of Photography has just reached our desk. It is a very handsome piece of work and reflects great credit upon the School. In addition to a large number of handsome reproductions of photographs, it contains full information concerning the work and methods of the School; information that is of the greatest value to those contemplating the study of photography in such a way and under such conditions that a practical knowledge of the art science may be secured in a reasonable length of time and at a nominal cost. By all means send for a copy of the new catalogue; it is sent free. Address, Keystone School of Photography, Box C., Downingtown, Pennsylvania.

"PHOTOGRAPHISCHER ALMANACH 1910."

This well-known German annual, now in its thirtieth year, has just reached our desk as we go to press. It is ably edited by Hans Sporl, of the faculty of the Lehr und Versuchsanstalt für Photographie, Chemigraphie, Lichtdruck und Gravure zu Muchen. A handsome frontispiece in the form of a portrait of the school's director, Professor G. H. Emmerich, adds to the value of the book. It contains a very full report of the events of the year, a list of German photographic societies, descriptive matter concerning new apparatus, and much other valuable information. Price, paper covers, one mark; cloth, one mark fifty pfennigs. Ed. Liesegang's Verlag M. Eger, Leipzig 20, Germany.

MR. WARD'S LECTURE.

Mr. H. Snowden Ward, of Hadlow, Kent, England, is giving a new science entertainment on the plan of Prof. Pepper's and others, entitled, "The Marvels of Photography." After a brief explanation accompanied by a few pictures of the developing tanks, by means of one brilliant light, the audience is photographed simultaneously with several cameras directed to various parts of the hall. Two very large prints are made on developing-out paper in full view of the audience.

An assistant at the same time makes natural color exposures with autochrome plates on a special subject, and also transparencies from the regular negatives of the audience. The immense paper prints of the audience are then displayed, and later the transparencies and color pictures are projected by a lantern upon a large screen.—"Scientific American."

The above is a note concerning one of Mr. Ward's lectures. Next winter that gentleman expects to visit the Coast; and

clubs, societies and the like will do well to communicate with him at the address given.

GIVE IT A TRIAL.

A recent letter from the Simplex Intensifier Company advises us that they have complied with the urgent requests of their local dealers and are putting out a twenty-five cent size. Experience has taught that the Simplex Intensifier requires only a trial in order to make a continued user; and it is therefore advisable to make it as easy as possible for the doubter to convince himself of the superior merits of this wonderful utility. By all means, secure a bottle and give it a trial. Ask your dealer and insist upon getting "Simplex." You will be pleased and surprised at the ease and simplicity of the process; and the improvement which you can make in many of your negatives will be a source of satisfaction to you. If you cannot find it at your dealers, write directly to the firm. Their advertisement appears upon another page.

INCREASED EFFICIENCY.

We are asked by the Taylor-Hobson Company to announce that their series II, Cooke anastigmats, may now be obtained to order with extension lenses somewhat like those furnished for the other series. By removing the front glass and substituting another, the entire focal length is increased. Thus, from the same point of view, the photographer obtains larger images of distant objects. These extension lenses increase the size of image about fifty per cent. For example: an object taken with the normal lens, and two inches long in the photograph, is, from the same position, made three inches long with the extension lens. Better results are obtained than with the separate portions of other makes, practically two complete anastigmats being available. Present users should note that their series II lenses may be fitted with these new extensions, but the register number of the lens should be given with the order. Extension lenses for Cooke anastigmats, other than the series II, have long been used, the back glass having hitherto been the one replaced. The series II are the only lenses which permit the change at the front.

PROGRESS.

Consulting Webster we find: Progress, a moving or going forward, proficiency, advancement.

The above was called to the writer's mind forcibly a few months ago, during the rush months of the amateur finishing trade in a well known summer resort and railroad town in California. The principal dealer in photo supplies, which business was carried on in conjunction with drugs, etc., had, in spare moments, during the previous winter, prepared an attractive lot of advertising matter and display cards which, when put into use as the amateur season advanced, had proved so successful in bringing his name and line before the public that by midsummer he had developed a volume of amateur developing and printing that should have netted him a tidy profit.

This man complained bitterly of his cost of production being so great that after all bills were settled there was little or nothing to compensate him for the time and worry contributed. He declared flatly that there was no profit in the work, and that he would not carry it on after that season. Scenting poor and lax methods, we started on a tour of inspection of his plant, which proved to be a short one, as his dark room, printing room, and other conveniences (?) were closely crowded into a space of about eight by eleven feet,

He was finally shown the error of his ways, and prevailed upon to give his workman a vacation, and make the experiment of sending his work to a firm who make a specialty of finishing and enlarging to the trade.

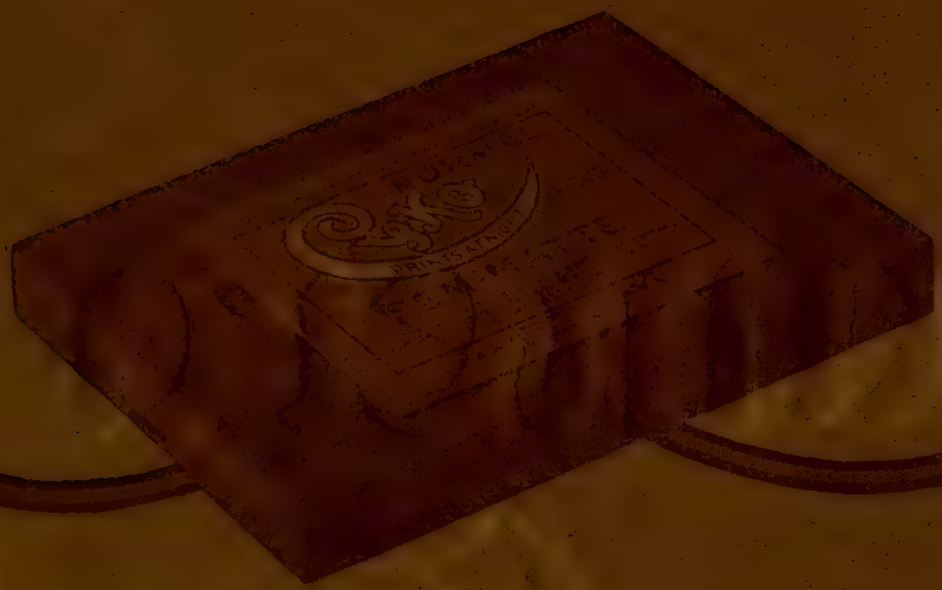
This occurred during the busiest months last year; his workman is still on his vacation, and he ships a package of work regularly every night to the Photo Craft Shop, 849-851 Ellis Street, San Francisco, whose advertisement appears in this issue, and the finished work is received by him at noon of the third day following.

In a recent letter he informed the writer that he was highly pleased with the new arrangement, had more time to devote to business-getting, and was gradually, by the high quality of his work and prompt service, corraling all the business in that line in town.

Vol. XVII No. 4 APRIL, 1910 Price, 10 C

Camera Craft

San Francisco, California



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THE BURDEN BEARER
By INA L. COOK

Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, APRIL, 1910. No. 4

With My Indian Friends

By Ina L. Cook

With Illustrations by the Author

THE TRYST.

THE poor Indian has been taken by fair and foul means, by fair and foul photographers all over the Indian world. It has remained for Edward Curtis and Frederick I. Monsen to produce the most artistic pictures, to the beauty of which even the Photo-Secessionist must give tribute, Mr. Monsen, especially, possessing the soul of an artist, the patience of a mother, and the perseverance of a photographer, has produced rarely beautiful pictures; and his lectures, it is said, are wonderfully interesting. The Eastman Company have published a delightful little booklet by Mr. Monsen, giving a sketch of his work among the Navajo and Hopi Indians, which will well repay reading.

My work began, not amongst the picturesque and romantic Indians of the north of Arizona, but down in the southern part of the Territory, where dwell the more prosaic Papagoes—Papago meaning "convert"—an offshoot of the Pima tribe.

Ill health took me to Tucson one winter about six years ago. Tucson—"watering-place" or "oasis"—shows few signs of its four hundred years. But one feels the mysterious influences which brood in the atmosphere, suggesting the infinite, without beginning and without end. So it seems with the deserts of the earth. Here it must be that life in forgotten ages was

JUANA,—PAPAGO.

Amongst the Papagoes I went with my little Kodak, thinking to bring down big game. I succeeded in bagging a few harmless little things. One picture of an Indian driving home the cows in the purple dusk over the shadowy desert was, in the original, a most marvelous color scheme, losing, of course, much of its beauty in the cold tones of the photograph. The prismatic hues of the desert are enough to drive an artist mad.

"Juana," a fine type of Papago, was my landlady's "washlady," engaged at the magnificent salary of twenty-five cents a day. Said landlady invariably addressed the woman as "Mohair," evidently a corruption of the Spanish "mujer," meaning woman, for, curiosity compelling me to request information lived in its intensest form; and, in gazing across the desert, under the thrall of its unnamable fascination, one might almost expect to see arise in material form from that ultimate desolation the matchless temples and towers of the seven lost cities of Cibola. And, when the only sign of human life now remaining upon the desert creeps out from amidst the barbed cacti, fit flora of the rocks and sands, we see our prototype in sepia, the Indian, who regards us as from some ancient era.

The Papago reservation lies on the desert about nine miles south of Tucson. In the midst of this reservation is situated the Mission of San Xavier del Bac, so old that there is now no record of its founding; and here the Indians meet and worship, send their children to the mission school, and till the land about, raise their crops, and, after a fashion, keep the sands of life in motion.

LIFE IS ALL A HUGE JOKE.

upon the subject, I was told: "That's what all the Indian women are called."

Being untroubled by native superstition, religious or otherwise, Juana was willing to pose for me, providing the remuneration was forthcoming after each sitting. The only objection she ever made was to posing with the "quijo" on her back. It is said that some of them believe they will die if a

PAPAGO WOMAN BASKETS ARE APACHE.

picture is taken of them; others have an idea that the photograph will represent them as nude, a consummation devoutly to be avoided, for these Indians are all well clothed and otherwise in their right minds; there's a sewing machine in nearly every hut. So, as a rule, they decline to be photographed. Once, out on the desert, having had the rather indifferent opportunity of accompanying a party of tourists, who insisted on driving out the nine miles and back at breakneck speed, and were in mortal terror that I might snapshot some one of them and charge them for it, I leaned from the carriage and snapped some Indian children playing a queer kind of game in the brush. One, a great boy of fifteen or so, ran after the carriage as fast as he could. With fire in his eye, he made strenuous efforts to reach the back

A NUTTE-BROWN MAYDE,—WASHOE.

of the vehicle. Becoming nervous as he drew nearer, I reached for the whip, then suddenly bethought me of a much more potent weapon, the Kodak! Quickly, as he clambered up onto the back seat, I turned the instrument upon him. Instantly all his bravado slipped from him; he dropped into the road and wriggled off like a snake into the brush.

At another time, on the reservation, I stopped in front of a typical hut, outside the low door of which were seated a man, woman, and two children. They would not hear to "quart' real," nor even "dos real," but finally acquiesced at "un peso." I made the mistake, however, of not paying in advance; for, as I stepped back and proceeded to locate the group in the finder, I discovered that my group had vanished. I thought at first the man had swallowed his wife and children and then been translated bodily; then I decided that the hut had swallowed them, and, stepping up—or, rather, down—to the low door, I looked in. There they all were; but how the deuce they all got entirely out of my sight so quickly will forever remain an inexplicable mystery to me. And there they stayed, and may be there to this day for aught I know, for they viewed me with their usual stolidity, and no amount of persuasion could bring them out.

From Arizona I went to Nevada, and there made the acquaintance of a family of Washoe Indians, who were domiciled upon a ranch where I spent several months. The ranch was called The Country Club, and supported a summer hotel. It was situated about a mile west of Verdi, on the Central Pacific. A Japanese cook and his helper were also part of the population of the ranch. When the Japanese and his lady assistant were employed and taken to the club, they were, on the assumption that they were husband and wife, shown into one room.

A MODERN CORNELIA.

"If you please," said the woman, in a sweet voice and excellent English, "we do not object to the one room, but we would like separate beds!" Out of her wages as dish-washer, chambermaid, and general helper, this Japanese lady was educating her husband in an Indiana college.

The Japanese and the Indians were constantly at war. The latter were supposed to help in the kitchen, and the language of the cook was most profane, when, on some sweltering day, the hotel packed with guests, they would calmly recline under the shade of some convenient tree, and with broad grins watch him fume and fuss and swear.

THE TRUANT.

These Indians were perfectly willing, upon payment of a small fee, to be photographed; they rather liked it; but if, for any reason, and it happened once or twice, they became suspicious that I was stealing a picture, I received such black looks that visions of tomahawks, scalpings, and cannibal feasts filled my dreams with terror.

From Nevada, still armed with my Kodak, I went to the southern part of California. In Riverside County, under the shadow of mighty San Jacinto, lies the little hamlet of Soboba, where a mere handful of unfortunate aborigines bake in the hot sun, shrivel in the dust storms of the desert, or fall victims to consumption. I stopped there one day in front of a dilapidated, ramshackle cottage, on the porch of which two Indian women were holding a talk-fest. One of them saw the Kodak and pointed to the open door. Inside sat an old woman busy at her basketmaking; they make very fine baskets there, by the way. I showed her the Kodak and a piece of silver. No, it wasn't twenty-five, it was fifty cents. She immediately got up, came outside on the porch, plumped herself down in a strip of sunshine, and went on with her work. At the click of the instrument, she looked up, seized the coin, pocketed it, picked herself and her work up, and went back into the house. She had evidently been there before.

The following summer took me to Colfax, just the other side of Auburn,

on the line of the Central Pacific in this State. About a mile from the town lived a family of Diggers, probably the most abandoned and helpless of these "last remnants of a dying race." A young medico piloted me over to the camp, and there we came suddenly upon the old blind woman, sitting with the two children clasped in her arms. She knew the doctor's step and voice, and when he explained the object of our visit, her only remark, brief and to the point, was: "Two bits."

"YES, WHAT DO I WANT OF MONEY?"

"Two bits," repeated the doctor. "What do you want of two bits? What do you want of money?"

"What do I want of money?" she repeated bitterly; "yes, what do I want of money?"

Ill, hungry, ragged, blind, and the great god Gold, her only help, withheld! But not from me. Meanwhile, the rest of the family had gathered near. The doctor, prompted by the imp of perversity, told the young mother to remove the clothing of the smaller children. Misunderstanding him, she calmly proceeded to remove her own, and then smiled generously at his hasty correction. Little Eve had a cold, so it was decided she should not pose in the altogether. Adam didn't like this lack of attire, and it was pathetic to see him try to drag his mamma back into the privacy of the shack to get his other suit.

All the pictures here reproduced were taken with a little Bull's-eye Kodak, and enlargements made from them. When I first began to take pictures, a very small and very dear little girl figured in them so extensively that I found the expense of developing and printing far exceeding the limits of my purse. So, investing a dollar and a half in an outfit, I taught myself the very simple method. The instructions accompanying each package of paper and each roll of film are so elemental that a child could easily follow them; and now the Kodak daylight developing tank makes the work easier still.

After two or three years' work with the Bull's-Eye, I promoted myself to the 3A Folding Pocket Kodak; and, for compactness, durability, and excellence of results, it has more than gratified my fondest anticipations. Its manipulation is extremely simple. You can take as many dozens of views as you like. You needn't go distances to reservations to photograph Indians if there are none at hand. Other subjects await your skill, and most of you have in your own homes and hearts the very best subjects that could

be found anywhere; and the records Kodak will give you to delight you for the rest of your life! After a little practice, you seldom lose a film, and, when you have learned to make the films pay for themselves, you will soon make them pay for all your other supplies, and then leave a profit. In another article, if Mr. Clute does not put this one in the waste basket, I will tell you how I, for one, make my films pay, and I have no more business head than a hypo tray.

But if you should get a chance to travel, don't fail to take along with you one of these small registers of your itinerary. The Indian, under one

THE BASKET-MAKER.—SOBOBO.

name or another, is scattered all over the United States, and certainly one could make an extremely valuable record of the different tribes, the more so as the race is so fast disappearing from the face of the earth. I traveled in search of my health and found it, so now I stay at home; but there are many jaunts I'd like to take, not so far away either. For instance, the Yuma Indians down south on the dividing line between California and Arizona are very picturesque in their make-up. The men seem about fifteen feet tall—seem, I said—and are magnificent specimens of humanity; ebony hair hanging in matted ropes below the waist. I caught only a glimpse of them as our belated train passed through, and cannot say much about the women, as they were mostly sitting down; but this and many another tribe possess pictorial possibilities found in no other race, except perhaps the very foreign ones, which only a very few of us are fortunate enough to visit.

Mr. Steadman's Demonstration

By Our Special Reporter

F. Morris Steadman, author of "Home Portraiture," the Aaba Exposure Scale, and "Steadman's Complete Exposure Method & Home Portrait Helps," gave two most interesting and instructive demonstrations of his methods before the members of the California Camera Club, in its rooms on Friday evening, February fourth, and Saturday afternoon, February fifth. There can be no doubt whatever as to the entire correctness and practical applicability of Mr. Steadman's theory of light measurement; for, on the occasion of the first of the two demonstrations, he proceeded, without hesitation or fear as to results, to make a number of well-lighted, correctly timed portrait negatives, using four ordinary drop-cord tungsten incandescent lights attached to the chandelier in one end of the assembly room, although this form of artificial light was one that he had never before used.

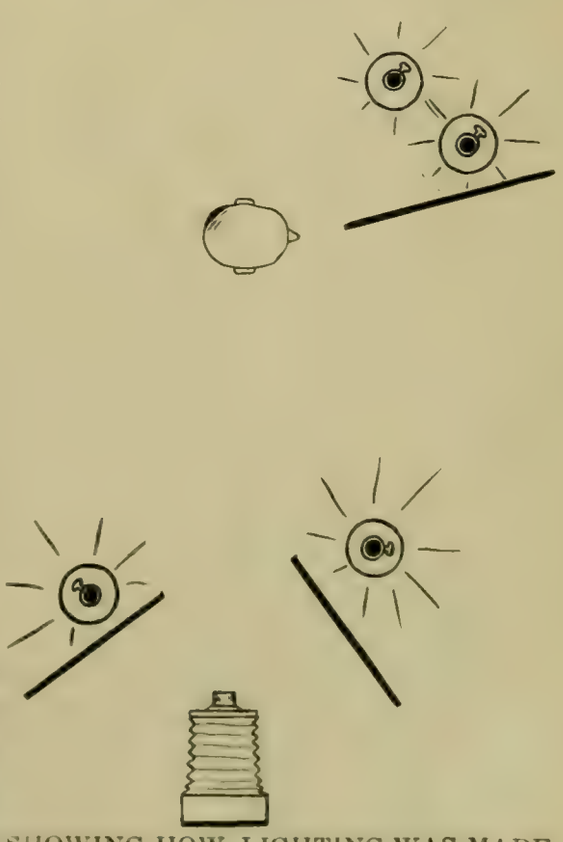
To start at the beginning, Mr. Steadman spent a few moments in briefly and clearly explaining the theory upon which exposure systems are based. He said: "It is obvious that, in order to determine the correct exposure, the photographer should be equipped with some means of measuring the intensity of the light he is using, just as it is necessary to employ definite units of measurement in other arts and crafts. That quality of light which creates chemical change should be termed actinicity. When we expose a plate in the camera, an invisible change is brought about by the actinicity of the light; but it is evident that this cannot suffice as a basis of measurement, a visible chemical change being necessary." On the other hand, any medium that assumes a tint under the action of light, such as gelatine printing-out paper (p. o. p.), gas-light paper, film emulsion, or the papers used in exposure meters, fulfils this requirement.

Mr. Steadman then took an ordinary pocket memorandum book and showed a small, star-shaped aperture in a corner of the front cover. Behind this he placed a strip of Solio paper, covered the star opening with a coin, held the book four inches from one of the lights, slid aside the coin, and counted sixty-four seconds, sliding the coin again into place. Examining the strip of Solio, it was found to carry a rather strong star-shaped tint. He explained that what was wanted was a just visible tint, and further that, in practice, he always halved or doubled the time of the first trial for the second trial, if such were found necessary. Again exposing the Solio, this time a new portion of the strip, thirty-two seconds were given, resulting in the desired just-visible tint. To show clearly the desired result, a third exposure was made, giving sixteen seconds, which was found to produce no visible effect. He explained that, as thirty-two seconds is a rather long time, it was advisable to use, for weak or artificial light, a tinting medium of greater rapidity. Ordinary roll film suits this requirement perfectly, and he had found that it tinted in approximately one-eighth the time required by Solio. To demonstrate this, he took a strip of the film, placed it behind

THE PORTRAIT BY INCANDESCENT LIGHT.

was sixteen inches from the light instead of four inches, the tint time was sixteen times thirty-two seconds, or, approximately, eight minutes. This is in accordance with the well-known law of inverse squares; that is to say, the intensity of any given light is in inverse ratio to the square of the distance.

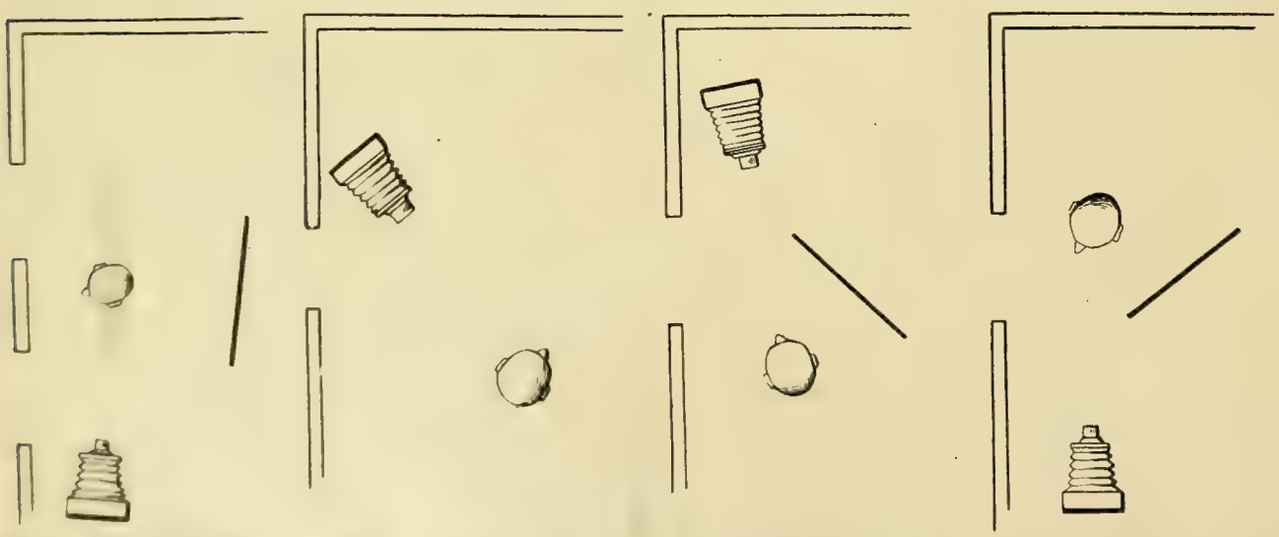
But as two lights were used instead of one, this tint time for one light at sixteen inches was reduced to half of eight minutes, or four minutes. This latter time, four minutes, is therefore the actual tint time at the face, and also the exposure with U. S. 32, the speed diaphragm of Ensign film. In other words, the test being made on film at four inches from one light; the problem became a matter of reducing the tint time so found to the tint with Solio at sixteen inches from the star-shaped opening and, again using the coin as a slide, exposed the film to one of the lights at a distance of four inches, for four seconds, and obtained the requisite just-visible t i n t ; four seconds with the film being e q u a l to thirty-two seconds, Solio t i m e , Mr. Steadman's standard. Mr. Steadman's kodak was loaded with Ensign film; and list of plates and film, is this emulsion, in his speed quoted as having speed diaphragm U. S. 32. To arrive at the correct exposure for the portrait to be taken, Mr. Steadman went on to say that, were the subject placed at four inches from the one light, using stop U. S. 32, the exposure would be the same as the tinting time, or thirty-two seconds. As the face of the subject



SHOWING HOW LIGHTING WAS MADE

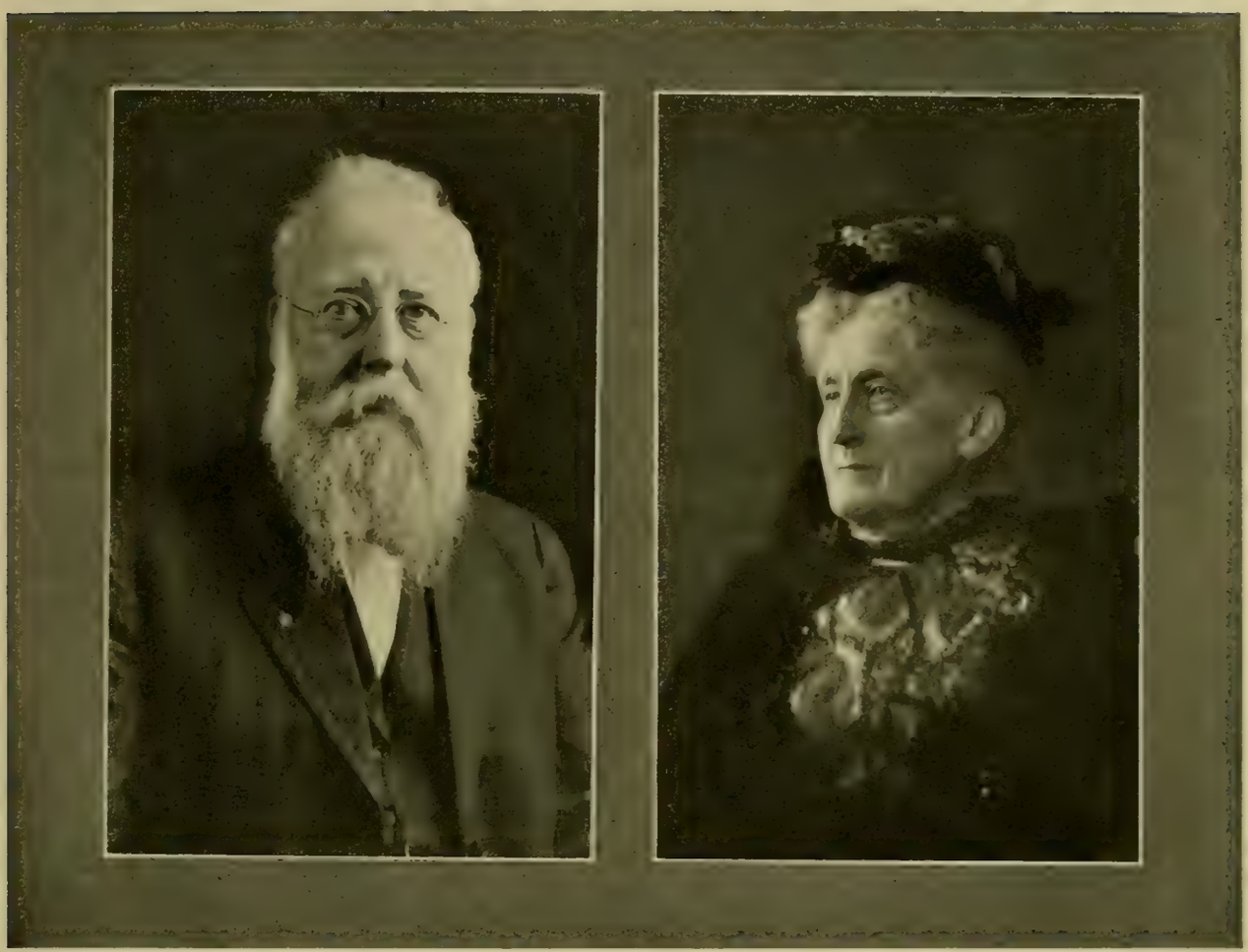
EXAMPLE NO. 1. EXAMPLE NO. 2.

two lights or where the sitter was really placed. Had this been taken with the Solio at the face and under the actual conditions, four minutes would have been required to get the tint; the use of the film at the nearer distance from one light was simply a time-saving expediency, as the measurement was thereby made in four seconds, and the tint time of Solio at the position



Plan: Example No. 1. Plan: Example No. 2. Plan: Example No. 3. Plan: Example No. 4.

of the face was arrived at by calculations quite simple, once the reason thereof is understood. As the actual exposure was made with a lens working at U. S. 1, or f-4, the exposure required was only one thirty-second of four minutes, or eight seconds.



EXAMPLE NO. 3. EXAMPLE NO. 4.

Mr. Steadman then proceeded to arrange the sitter, shade the two lights so that they would not shine into the lens, and locate the remaining two lights to illuminate more softly the shadow side of the face. This being done by requisitioning the assistance of four of the members to hold the drop lights, the exposure of eight seconds was made. In fact, a series of six exposures, showing different lighting effects, including a very fine line lighting, were made in rapid succession. The strip of film was then placed in a developing machine and in a few minutes shown to the members as a strip of six perfect portrait negatives. The eagerness of the sitters to secure and retain these examples of Mr. Steadman's skill resulted in only one of them being available the next morning, perhaps the least pleasing of the set. A reproduction of a print from this unretouched negative is shown herewith.

Mr. Steadman explained that the worker desirous of using artificial light had only to test the light at the given distance of four inches and he would always have a standard for that particular form of illumination. Were he to take another picture at some future time, employing this same form and strength of light, he would know that its tinting time at four inches was thirty-two seconds, and calculate his exposure accordingly. Another point explained was the fact that the paper or film being used as the tinting medium did not have to be protected from light, except superficially, until placed in position behind the book cover carrying the star-shaped aperture. If the paper or film became slightly tinted by being

carried about, or through the strip being examined in too strong a light, no harm would result, as there was yet the same power of showing a first visible tint as between the portion exposed through the hole in the card and the contiguous portion, as was possessed by the most carefully protected paper or film emulsion.

The success of the Friday evening demonstration brought out a large attendance for the one given the following afternoon. In order to allow the members every opportunity of seeing how simple the matter became when gone about rightly, and how independent the worker really was of the source of light, Mr. Steadman elected to use the one window in the extreme south end of the room. This window looks out upon a dead wall; and, to make matters still more trying, there was another high building jutting out at right angles to the wall in which the window was situated, one that alternately reflected a strong light or cut off the available light from the northern sky, as the clouds passed over the face of the sun. Proceeding in the same way as the evening before, the light was tested at the face of the sitter with a piece of Solio paper and found to require four seconds to obtain a just-visible tint. Eastman film was used this time, having the speed diaphragm number of U. S. 16. Four seconds at U. S. 16 being equal to one-half second at U. S. 2, that exposure was given and, as before, found to be absolutely correct. Several of the prints are reproduced herewith.

This is the sign of the greatest art—to part voluntarily with its greatness, to make itself poor and unnoticed, but so to exalt and set forth its theme that you may be fain to see the theme instead of it.—John Ruskin.

The Photo-Secession Exhibitions

On another page is given a commendation in the form of a brief extract from the conservative "Post," of New York, together with an abbreviated list of the available material that will be shown at coming Photo-Secession exhibitions. It can be safely said that these little shows are, artistically considered, the most advanced ones held in this country. Mr. Stieglitz has been, and is, demonstrating beyond dispute that his original premises were correct: That, if ninety-nine per cent of the pictures shown in so-called art exhibitions were fine art, then some photographs must be accepted as fine art. He further claimed that abstraction was beyond photography and that that was the highest form of expression, the real big thing. Rodin, Malisse, and workers of that type, have proven him right. As we understand it, his contention is that the average painter is really nothing more than a bad photographer who does the work by hand; and an identical position seems to be the one really taken by Mr. Bernard Shaw. The aim of Mr. Stieglitz and of the Little Galleries is, first of all, to secure an understanding of principles, fundamental principles; and this is certainly being done.

How They Make Negatives

By C. H. Claudy

Our Wold Air Brush Prize Article for April

It is impossible for me to tell you how I run my studio, because I haven't any studio to run. But I am going to tell you how some of the other fellows run their studios, or at least that part of the establishment which concerns itself with the making of the fundamental of portraiture, the negative. This I can do because I happen to have had the opportunity to observe the widely differing methods of so many professional workers.

The negative should be regarded as the vital part of photographic work. Be your operator never so expert, your printer never so skillful, if the dark room man does his work improperly, the resulting print will be lacking in those qualities for which customers pay you good money.

There are almost as many development systems today as there are men working them, but, in a broad classification, they are resolved into tray development, local or brush development, tank development, and factorial development, a combination of tray and tank.

Tray development needs no exposition here; it is the old system of half a dozen pans filled with new developer, old developer, carbonate solution, bromide solution, warm and cool water, etc., etc. It still produces good negatives, but, as is admitted now by all expert photographic chemists, in spite of, and not because of, the manipulation of the plate from tray to tray.

Local or brush development is the most highly specialized branch of the art of making a negative from an exposed plate. In general, the practice may be stated to be a starting of the development in a very weak normal solution, and removing it from the tray as soon as the outlines are seen, after which special portions of the negative are developed individually by the application of developer of normal strength with a brush. The locally applied developer is kept from spreading over the plate, either by a previous ringing with cold glycerine of the art to be locally developed, applied with a brush, or the admixture of the developer with glycerine. By this system high lights can be strengthened, and, in some cases, originated, as in the case of a light background which is locally developed to form clouds, sky between shadowy trees, etc., by the application of developer.

In skillful hands the process produces some astonishing effects; but by "skillful" is meant more than an ability to apply the developer and a knowledge of when to stop. I recall one example of such manual skill which had a broad high light on the shadow side of the cheek in what was intended as a Rembrandt lighting. It was striking enough, but even a customer, ignorant of art or photographic principles, was struck with the inconsistency and wanted to know "from where that light was coming."

Tank development is the most modern of methods for the development of plates in the studio; and the enormous manufacture and sale of the

necessary apparatus in the past few years has shown that it has come to stay. It is nothing more nor less than the development of all negatives in a weak solution for a normal time, the solution having a normal temperature and normal constitution. The word "normal" in this respect must be taken as meaning correct for the results desired. Any solution of any strength or any temperature, which, acting for any time whatever, produces the kind of negative you desire, is normal.

Inasmuch as almost all plates, and particularly all those commonly used for portraiture, have many things in common, differing in degree and not in kind, certain set factors in tank development are generally accepted as normal. For instance, anything in temperature above seventy or below sixty-five degrees, is not normal, and any developer working in quicker time than ten minutes or slower than one hour is no longer a normal tank solution. The general acceptance of the word normal, as applied to a negative, means, of course, that negative which produces the print you want on the paper you use, with the least effort, dodging, masking, and expenditure of time.

Factorial development is the treatment accorded a plate in a tray of solution of known strength at known temperature, in which the time of the first appearance of the image is noted, which time, in seconds, is multiplied by a certain number known as the factor of the plate, the result being the total time of immersion of the plate in the developer. It has been largely superseded by the tank method proper, as being easier and quicker, but factorial development, properly worked, has always produced good negatives.

The tray worker should have no difficulty in choosing between tank and factorial systems, if desirous of making a change, since both produce good negatives, but the one—tank—much more easily and with less possibility of error than the other. There is no competition between either tank or factorial development and brush work, the latter being a highly specialized system of individual treatment, requiring much practice, good taste and judgment, and considerable intuition, while both tank and factorial work are largely automatic in their working.

For this reason, after having outlined the various systems, it seems advisable to note here more particularly some of the various modifications of tank practice, as seen in various studios.

There is one gallery which I visit which possesses tanks to hold one hundred and fifty 5x7 negatives. The tanks are long, wooden troughs, with thin walls, with grooves to hold the plates, and Glycin is the developer used almost exclusively. This particular agent was chosen because the tanks could be filled with it and left full for some time, there being but little effect of oxidized developer on fresh plates and the absence of necessity for changing the developer with every batch, saving time. The gallery does a huge trade in medium-priced work. The tanks were not successful, however, until they were inclosed in wooden jackets, through which warm or cool water could be run, for regulating the temperature. Now there are two thermometers to each tank of twenty-five plates, one in the solution and one in the water jacket.

Directly opposite to this idea of saving time and chemicals by the use of a long-acting solution over and over again is the method in use in a certain prominent studio which might almost be called a one-man affair; not that plenty of help is not employed, but because the proprietor is everywhere, doing his own operating, overseeing the developing, watching the printing, and generally acting as the business head of a manufacturing establishment with a reputation to sustain. He uses metal tanks, each holding a dozen plates, and has them in little wooden racks in a sink. A pyro developer is used exclusively, and, unlike any other man I ever saw in a professional dark room, refuses steadily to keep any of his chemicals in solution. The carbonate and the sulphite for each day's work are weighed out at the time, the two sodas dissolved together in warm water under trituration in a mortar, the resulting soda syrup mixed in a huge twenty-gallon enamel kettle, which is set upon a gas stove and brought to a temperature of seventy-two degrees.

"Why seventy-two?" I asked, when I first read this thermometer.

"It chills to sixty-eight when poured into the tanks, in this weather," he said—it was winter—"and the plates and racks chill it further a degree or so. I find that seventy-two original temperature, used within a few minutes after being heated, gives me exactly the tonal quality and gradation I want."

After the temperature is secured, the solution is ladled out into the tanks, which are marked to show how full they must be, and then the pyro, measured in a scoop, is placed on a shelf above each tank in little glass ladles with long handles.

Meanwhile the assistant has been putting the plates into the tank racks in another room. As these racks are brought into the tank room, the man watching the tanks takes up the glass ladle with the pyro in it, drops it into the tanks and stirs it vigorously.

"You will note," said the proprietor to me, "that the pyro has no chance to oxidize before the negative gets into it. It is a fad of mine to have clean clear, black and white negatives, without the slightest trace of yellow. I have never managed to get this kind of negative with a pyro developer made up and kept standing, without unduly increasing the proportion of sulphite, which is, in effect, a decrease in the proportion of carbonate, thus altering the gradations in my negatives. I use but slightly more sulphite than carbonate in this formula, which is my private invention, and by putting the pyro in but a matter of seconds before the plate, no oxidation takes place (which would serve to stain the negative) before the negative is in process of making."

Development time here is twenty-five minutes, during which time the racks are raised and lowered in the solution, at intervals of five minutes, to prevent drifting of the image. This practice is not, in my opinion, as good as reversal of the plates, but it seems to work well here, probably because none of his negatives have great contrasts.

"I find that an acid bath gradually coats my racks with rather dirty-looking silver from the plates," I was told, "but racks are cheap, and if I don't like the silver plating I can buy new ones. But the doing away with

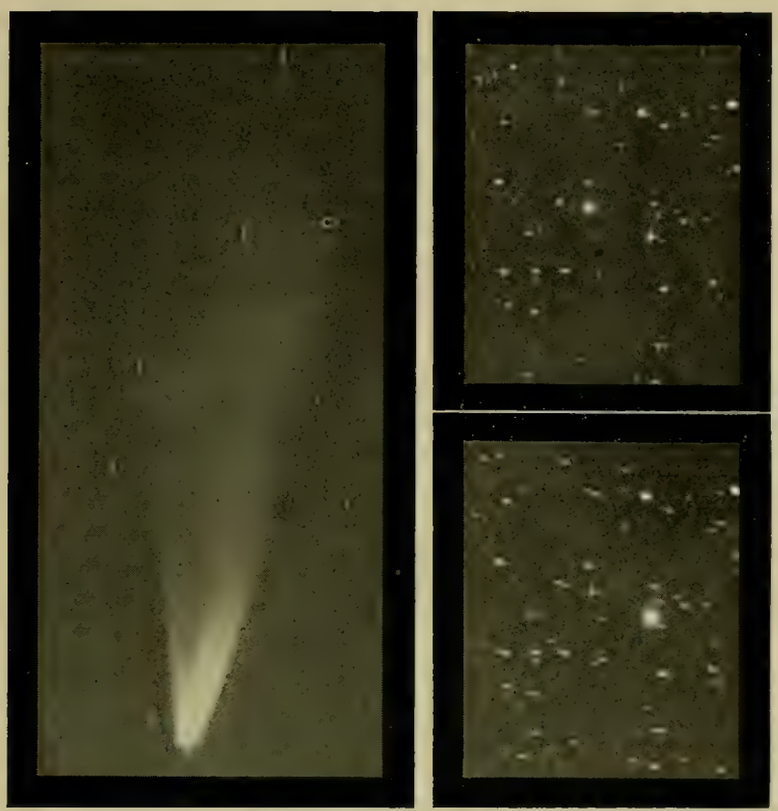
the handling of the plate between development and fixing and fixing and washing I regard as highly important, in securing a negative which is not only free from scratches or blemishes, but escapes the possibility of accident."

Still the tank method, but totally different, is the idea of a New York photographer. He uses glass tanks for his developing, and stays in the dark room during the whole time of development. He has never satisfied himself that he could trust the tank for all exposures, being either unable to grasp or unwilling to believe the principles of tank work, as laid down by Hurter and Driffield. He insists that while the tank is the ideal method of holding the negative during development, that is vertically, it is necessary to watch the plates and remove each when it is finished, instead of allowing them all to complete development at the same time. So he handles thirty plates at once and slides each one into and out of its wide groove in the glass tanks (which are but glass fixing boxes), examining them as he takes them out and removing them to the fixing bath as each is, in his judgment, a finished product. Not infrequently he drops a half-developed plate into the slides of a glass box containing only ice water, there to remain, development checked, until he has time to give it a local touch or two with the brush and glycerine.

In all the tank shops in which I have been, except the one described, the developer is made up in quantity and kept ready for use. In this connection, the aspirator bottle is a great comfort to those who use it. For the benefit of those who may not know this convenient dark-room appliance, let it be said that the aspirator bottle is one having a hole near the bottom, in which is fitted a glass stopper, with a tube and glass spigot. Filled with soda carbonate and soda sulphite and pyro and oxalic acid solutions, these aspirator bottles allow developer to be made up in the minimum of time and the maximum of convenience. They are also extremely useful for holding developers which in solution are apt to oxidize, as M. Q. for D. O. P. paper. The developer is covered on top with sweet oil, to the depth of an eighth of an inch. The cork is, of course, omitted, or the developer would not run from the spigot. The oil acts as a seal, however, and prevents the developer coming in contact with air, the result being that M. Q. can be made up in very large quantities and kept almost indefinitely and used at any time in the original clean and uncolored state. After an oil-sealed aspirator bottle is emptied, the oil which clings to the side of the bottle should be removed, some hot water and sand shaken about the inside of the bottle providing the means.

Needless to say, the vast majority of photographers still use the old system of hand or tray development. But it is significant that the leaders in the profession are adopting the newer methods, even as it is illuminating for him who runs to read that, where you find convenience and cleanliness in the dark room, you find success and good trade. Where are mess and untidy arrangements, a struggle for existence also is. I would not pretend to say which is cause and which effect, but the matter is at least food for thought.

Comet Photographs



Dear Mr. Clute:

As you requested, I will give you a few lines of explanation of the small photograph showing Comet 1910a and Halley's Comet. The larger comet is 1910a, photographed on January thirtieth, 6:33 to 6:54 P. S. T. The right hand upper is an exposure of fifty minutes, January twenty-ninth, and the lower one an exposure of two hours, January thirtieth, on Halley's Comet. The small x on each view shows where the comet appears on the other one, and gives the motion of the comet in about twenty-four hours. The guiding of the camera during exposure was directed on the comet and caused the stars to trail on the plate. The Comet 1910a was so near the horizon that the effect of atmospheric refraction caused it to set slower than the rotation of the earth would call for, and accounts for the difference in the length of the star trails near the head of the comet and those near the end of the trail. The comet was moving about one degree per day.

The photographs were made with a six-inch Brashear portrait lens, and camera mounted on the tube of a six-inch telescope mounting, which was set up on Mt. Wilson, near Pasadena. The outfit has been shipped to Honolulu for work on Halley's Comet in April, May, and June.

Hoping that this may be of interest to readers of "Camera Craft," I am,

Sincerely yours,

FERDINAND ELLERMAN.

Art is the child of time and of precedent. It inherits the ages; but unless the artist comes into his inheritance, he is helpless. At best, can he go but one little step beyond the fathers, add one little stone to the edifice; and, in order to accomplish even this much, he must know well the work of his predecessors. If by some dreadful catastrophe all the art of the world should suddenly be destroyed and all knowledge of it blotted from the minds of the survivors, it would require two thousand years for humanity to recover the lost ground. As an artist is dependent upon the past, it is evident that he must strive to see and to study all of the past art that he can find—to feed his mind constantly upon it.—Birge Harrison.

El Volcan De Colima

By Laura C. Fredendall

The accompanying photograph is of the eruption of the Volcano of Colima, which is situated on the boundary line of the States of Jalisco and Colima, one of the West Coast States of Mexico. Situated in an almost tropical zone, this mountain rises to a height of over thirteen thousand feet. The peak is never without its crown of smoke, either rising in a slender white column, or drifting down the slopes when the atmosphere is too heavy to admit of its rising.

MT. COLIMA IN ERUPTION. COPYRIGHTED 1909, By LAURA C. FREDENDALL.

But, to see Colima in its beauty, one must see the volcano in activity, and may count himself fortunate to be in sight of this magnificent spectacle at the time. The writer last year spent three months on the Hacienda of La Joya, at the base of the volcano, and witnessed four eruptions in February. The first, which was preceded by an earthquake, was accompanied by a roar of the internal upheaval, and a mass of smoke rolled upwards as if pushed by successive explosions, while more rolled down the slopes of the mountain in dense volumes, easily distinguished from the white vapor clouds that enveloped the peak that day. The second eruption was at night, and, owing to the darkness, was of remarkable beauty. The glow on the drifting smoke overhead was the first intimation of the explosion which followed, and the sound echoed about the base of the mountain and in the canyons with startling effect. Into the air shot a mass of red-hot rocks, ashes, and flames, which set aglow the column of smoke which now poured out of the crater, making a display, lasting nearly an hour, which no amount of modern pyrotechnic genius could equal.

The second daylight eruption was unhampered by clouds, and produced a beautiful picture; it is of unusual interest, as probably none have ever been

taken so near the critical moment of eruption. The usual volcano photographs are taken after the smoke has begun to drift. The writer, ever watchful for a possible eruption, was fortunate in being able to secure it within the first moments of the outpouring, again demonstrating the necessity of the loaded camera always within easy reach, and the splendid results attained by even a small camera, the one used being only a 3¼x4¼ folding pocket Kodak.

READING CINDERELLA.
By EDGAR A. COHEN

In the Sleeping Sickness Country

By Ellery S. Caywood

With our moving picture camera we got some very good results in Uganda. The trip was an interesting one, but I can assure you I would not like to live in that country. Some of the islands in Lake Victoria have been very densely populated, but sleeping sickness has killed off the inhabitants. On some of the islands we did not find a living person. The

A SLEEPING SICKNESS CAMP. By ELLERY S. CAYWOOD.

few that the disease had left had been removed to the hospital camps. Made a fifty-mile round trip to one of these camps and found nearly four hundred patients in charge of one doctor, who lived there with his wife and children. The disease is not contagious when the patients are removed from near the water where the tetse-fly abounds. Herewith is one of the little films taken at the camp.

The Boyce's Balloonograph Expedition has been a wonderful success and a most interesting trip. Down near the German border, Mr. Boyce, William C. Judd, one of Africa's most famous hunters, and myself, of course, with our "safari," went west into the elephant country. But you have no doubt seen pictures made on this trip and Mr. Boyce's account of the thrilling experience in the Kisii country. Mr. Boyce sailed from Nairoba, leaving Mr. Hughes, the secretary, and myself to go to Uganda. We will later sail for Southampton, via Cape Town, and I will try and send you a little story and some pictures when I find time on the six weeks' trip.

Frank Morris Steadman and His Theory of Light Measurement

By Fayette J. Clute

When we pause to consider the matter, it seems strange that there is no established unit for the measurement of the actinicity of light and of lighted surfaces. Turning to the books on physics, we find that there is an accepted, definite unit for the measurement of area, volume, and extension; a means of recording degrees of heat and cold; even the comparatively new energy, electricity, being measurable in units of its own. But when it comes to light, the books are strangely silent. Further than a crude factor, the theoretical "candlepower," applicable only to the source of light, we have no definite means of determining or recording the intensity of a surface as it may be illuminated in nature. All this had been brought most strongly to the attention of the writer by having an opportunity of examining a few pages of the manuscript of a new book which Frank Morris Steadman will ere long have ready for the press.

This book is being compiled in a form that will make it applicable to the needs of schools and colleges as a text-book on this important subject. In this work, Mr. Steadman has the assistance of Doctor Arthur W. Goodspeed, of the University of Pennsylvania, a widely known instructor and physicist. In saying that the theory of light measurements set forth in this book will fill a heretofore rather unaccountable void in the bibliology of physics, suggests the importance of the work these gentlemen have in hand.

The applicability of a unit of actinicity to the measurement of the energy expressed by light sources, or surfaces illuminated thereby, seems never to have occurred to the scientists. Mr. Steadman's explanation of this situation seems to be the only rational one. He says that the acceptance of radiation as the basis of investigation and calculation has caused them to overlook the applicability of the law of convergence to such use. Convergence he deems the only rational basis upon which can be founded calculations intended to give results applicable to either a study of the subject or to practical use. This fact, as Mr. Steadman points out, is confirmed by the employment of the law of convergence in the determination and designation of the intensity value of photographic lenses and their stops by the focal or "f" system. As he points out, we wrongly confine the use of the term "focus" to the creation of an image; but it is also true that each individual point on any and all illuminated surfaces is a focus of all the rays of light which may converge from space upon it. If we point a camera, equipped with a lens, at the sky, the intensity of the light impinging upon each point on the plate is the same, with or without the glasses in the lens, except for the slight diminution occasioned by the absorption, reflection, and the like, of the glass itself. Using the lens,

there is, of course, an image-forming plane at some distance from it; but this fact has no more to do with the law of convergence and intensity than it has in the case of the lenseless opening which has no focal point of its own. This lenseless opening has an "f" value depending upon its diameter and its distance from the plate; it, just as does a lens, admits cones of light which converge, independently, to each point on the plate's surface. An opening of two inches in diameter, two inches from the plate, admits a cone of light having, according to this law of convergence, a value of f 1. Mr. Steadman has chosen, as the most practical unit, a conveniently small one, f 64. With this as a standard unit, the unit value of even the smallest stop in ordinary lenses may be expressed in whole numbers. By this unit method of measuring cones of light, calculations having to do with light are very greatly simplified. As applied to lens stops, f 8 has a value of sixty-four cone units; f 4, two hundred and fifty-six units; f 1, four thousand and ninety-six units; and a hemisphere of unobstructed sky, approximately thirty-two thousand units.

One is justified in calling attention to this matter at this time by the important part that Mr. Steadman's work will no doubt play in the simplification of the one great problem in photographic practice, the determination of correct exposure. And, what is not entirely unimportant, the unification of the actinicity of surfaces, as made plain in his book, may result in the crude and unscientific methods now so frequently put forth being relegated to the limbo to which they are predestined by reason of their inherent lack of scientific foundation. One can hardly doubt the importance of Mr. Steadman's theory, either in an educational or practical light, after reading the letter below from one of our best-known scientific experts, Doctor Arthur W. Goodspeed of the University of Pennsylvania. He says:

"The method of photographic practice soon to be published by F. M. Steadman, whom I have assisted with the MS, is, as far as I know, new and original in character. It is based on simple physical units, and the actinic intensities of all surfaces are measurable and expressable in simple numbers. Diaphragms and the relative apertures of lenses are studied with reference to the solid angles subtended at points of the sensitive plate, and the speed of lenses as well as the time of exposure required in any given set of conditions are calculated and expressed in purely physical terms.

"The method of expressing the speed of emulsions in this system is simply to state the time necessary with any emulsion to effect a normal exposure when the lens diaphragm subtends one cone unit and the surface photographed is of one unit intensity.

"It cannot be denied that, up to the present time, the actinicity of surfaces as a quantitative value has been entirely ignored in the schools, and there has been no popular conception of its basic importance in the practice of photography. I believe this system to be the first one ever devised by which the actual light conditions of nature and all the other elements which enter into photographic practice may be perfectly understood and expressed in simple mathematical terms.

WAITING FOR HER CHUM
By F. MORRIS STEADMAN

"The system is, in my opinion, adaptable to school study, and will be adopted in the department of physics of the University of Pennsylvania as soon as it is ready. I believe that it should be accepted as the basis for the study of photography as a simple science.

"(Signed) ARTHUR W. GOODSPEED."

Before concluding, I would like to point out that Mr. Steadman's position is a unique one in the field of scientific investigation, inasmuch as his theories are the results of observations and study called out by the problems presented in his own every-day practice of photography. I should add that, in the above outline, there has been no effort made to more than present that portion of his theory having to do with the measurement of cones of light according to the law of convergence; his method of determining and unifying intrinsic actinicity itself being neglected in order that the obvious difficulty of making myself clear might be minimized.

A CATTLE SALE By H. H. THAMS

Mr. Macness On The Coast

George W. Macness, of Burke & James, Chicago, spent about ten days in this city in the middle of March, coming from the South and leaving for Portland and the Northwest. He reported business as being exceptionally good, particularly in the several new lines which his firm have placed on the market since his last visit, over a year ago. It goes without saying that he was accorded a hearty welcome by the trade here on the Coast, where he has made a large circle of friends by his businesslike and satisfactory methods of handling the large business of his firm, as well as by his genial and happy personality.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, APRIL, 1910. No. 4

Send In That Coupon

Although our Advertising Contest will have closed by the time this reaches our readers, we would like to have a few hundred more votes, to the end that a more general expression of opinion may be available. In justice to those who have already sent in their ballot, we cannot extend the time. Neither can we award the prize to one who sends in a ballot after the closing date. But, fill out the coupon that is printed again this month, write the required letter giving your reason or reasons for the selection made, and we will, in return, extend your subscription to "Camera Craft" four months. Select only advertisements in the December, 1909, and three first issues of this year. And do not do this for the extension of your subscription; do it as a favor to us. We extend your subscription merely to show our appreciation of your kindness in our behalf. We want to get as many votes as possible, to the end that a compilation of the results will have a real value as an expression of the ideas of our readers as to what advertising is the most effective. Send in this last ballot, please.

We Want More Professional Articles

Our efforts to provide an instructive series of articles for the professional photographer have proven successful beyond our most sanguine expectations. We were told that the professionals of the country were not enterprising enough to read the journals of their craft, much less write for the benefit of their fellow-photographers. We have proven conclusively that the professionals will subscribe for and read a photographic magazine that gives them helpful information. Our subscription list comprises an almost complete list of the professional photographers in many towns throughout the country. But, to return to the articles; kindly make an effort in that direction and submit the results. We cannot use all that are sent in, but we can use many. We will help you in every way possible, but we want your ideas. We will make them readable, if possible. To return articles submitted is an unpleasant task. We trust that those of our friends whose kindness we have had, and may still have, to repay in this seemingly unkind manner, will feel that their disappointment has given us only regret. Neither do we wish to discourage those who are contemplating an article. We can use a number in addition to the several good ones now on hand. It is not a difficult matter to fill the requirements. Simply ask yourself, once you have the article well in mind or the first rough draft made: "Is this the most helpful advice, the most useful information,

the most valuable suggestions, that I could give a young friend, one whom I wished to see prosper in his new photographic undertaking, were I to be allowed about two thousand words in which to do it?" If you can answer this question in the affirmative, the article will most likely win for you a fine utility in the shape of one of the new Wold Air Brushes. None of the articles which we have to decline would measure up to this standard. One was padded out with some ten or twelve developing formulas, all for gaslight papers. Another was but a mass of generalities that have been worn threadbare in past years. A third was, when boiled down, simply the statement that it was of no use to try and make a success except by making one's work artistic, with the closing dogmatism that one could not make his work artistic unless he was artistic by nature. Every package of paper one buys contains more formulas that he will ever require, and good ones, too; possibly the best for that particular kind of paper. So, why give more than one or two with your reasons for preferring them? And, as to telling a man he should attend closely to business, turn out good work, and generalities of that kind; of what value is the advice in that form? Tell him how to attend to business and how to produce good work. Get down to concrete information. And do not harp on the importance of artistic work. There are too many successful photographers who have built their reputation, and a not-to-be-ignored bank account, upon good, straightforward, technically perfect photography, combined with the application of good common sense to the conducting of their business. Forget that you are writing an article. Use your "natural tone of voice.' Just imagine that there is a real personage, just one—not a lot of critical readers, and tell that one just what you think will help him most from the store of information that you yourself have gathered during your experience. And explain why as you go along. If a doctor tells you to go to Colorado, he tells you why. If a demonstrator asks you to use his paper, he tells you why you should use it. Of course, if the why is obvious, or if results are shown, the why is there. But be sure it is. We all learn only by seeking answers to our everlasting whys. I have told you why several times in this short infliction.

Mr. Bissell Here

Lewis H. Bissell, President of Illinois College of Photography and of Bissell's College of Photo-engraving, has been spending a few weeks here, visiting his daughter, Mrs. J. F. Magee. A short trip will be made through the southern part of the State before his return. Mr. Bissell reports an increased demand for three-color half-tone photo-engravers, and the outlook for the college, which makes a specialty of that branch, correspondingly very encouraging. As a member of the National Association, Mr. Bissell was tendered an informal luncheon by the local Photo-engravers' Association, made up of the heads of the local engraving firms, and expressed himself as more than pleased with the hearty reception given him. The trip has been so enjoyable to both Mrs. Bissell and himself that he hopes to make us a visit again next winter.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

BROMOIL.

It is a long time since I first described the Oil Process in these pages; and, in the interval, it and its modification, Bromoil, have grown to be the dominant processes among the European pictorialists. In "oil," a sheet of paper sized with bichromated gelatine is printed under a negative and soaked in water. This yields an invisible image consisting of gelatine in relief, which is then developed by "inking up" with lithographic ink, after the manner of producing an etching. The advantages are complete control over the values of the print, much more so in fact than is gained by gum printing, and a retention of detail and texture which the latter process often sacrificed. Shortly after the introduction of "oil printing" by Mr. Rawlins, Mr. Welborne Piper described a method whereby a bromide print or enlargement could be made to yield a colorless gelatine relief capable of being pigmented in the same manner as the oil prints. I used the method immediately after its introduction, and one of my most valued prints is a Bromoil made at that time. I should have, long before this, given working directions in this digest, but each month brought some modification of the original method, and I am not at all sure that we have reached finality. So far as the present condition is concerned, I do not know that I can do better than give our readers the gist of a lecture by Mr. H. W. Rennie to the Birmingham Photographic Society and reported in the "British Journal of Photography." Let me preface his account of the actual working by saying that the process depends upon first removing the silver from a bromide print with a bleach; secondly, upon causing the gelatine in which the silver was imbedded to swell unequally so as to reproduce the image in relief, which is later made visible by the absorption of ink. Mr. Rennie commenced by describing the various bleachers that are in use and ended by giving a formula of his own. He said:

When Silvax is used the bleached print must be soaked in one per cent. ammonia before fixing. I find that if this is not done the paper turns red in the fixing bath. My own favorite formula is as follows:

10 per cent. potass. bromide.....3 parts.
10 per cent. potass. ferricyanide..2 parts.
10 per cent. potass. bichromate...4 parts.
10 per cent. hydrochloric acid.....3 parts.
10 per cent. alum .....8 parts.

Mix for use. This is cheap, and the ingredients keep permanently. The mixed solutions can be used over and over again if always used in a clean porcelain dish, and not in enameled iron dishes. It seems to give the maximum effect with the minimum of uncertainty. To make the above ten per cent solutions simply dissolve one ounce of each ingredient in a half-pint bottle by filling up with water; this is practically ten per cent.

Most of the best-known makes of bromide papers are suitable for the process, but papers in which the gelatine has been toughened by chrome alum or formaline are much more difficult to pigment than others, as also are platino-matt papers, which appear to contain arrowroot as well as gelatine, or in which the emulsion is sunk into the pores of the paper and is not all on the surface.

As to the temperature for bleaching, etc., I find that the best results are obtainable by working all solutions at seventy-five degrees Fahrenheit, except in papers which have been hardened, when it may be necessary to work as high as ninety-five degrees.

Drying prints after bleaching, etc., is most important, and I am prepared to prove that it is absolutely essential to best and easiest results. It is quite possible to get a good print without this preliminary drying, but I assert that a still better print can be obtained, and with much less

trouble, if dried bone-dry and then re-soaked in water at seventy-five degrees for fifteen minutes so as to get a uniform degree of saturation. I have pulled several beginners at Bromoil out of the slough of despond simply by insisting on this fact and persuading them to dry their prints before pigmenting.

In the "Amateur Photographer" of August 17th last Mr. Sellor described a simplification of the process, in which he claimed to save twenty minutes to half an hour by developing the bromide print, rinsing, omitting the first fixing in hypo and the subsequent washing, and then simply bleaching the freshly developed print, soaking in acid, and fixing and washing immediately before pigmenting. I myself pointed out the possibility of doing this when demonstrating at Handsworth last year, but I find it a most inconvenient process if more than one print is done at a time, as, if the developed print is not fixed, it must be protected from light while the other prints are made and developed, and it is, therefore, necessary to complete the whole process at one sitting.

I will now describe the details of the method by which I find I can depend upon getting a straight result every time, and which, I think, is the quickest method when, say, half a dozen prints are done at once. When you have half an hour to spare make your five or six enlargements on carbon surface bromide, develop with amidol, fix and wash, when the prints can either be dried and put away for another day or bleached at once while wet. Warm the bleacher, mixed as before given, to about seventy-five degrees Fahrenheit, in a porcelain dish, insert the prints at intervals of thirty seconds, of course keeping them moving, then by the time the sixth print is in the bleacher the first will be ready for washing. Rinse in water at seventy-five degrees. Take some five per cent sulphuric acid (one in twenty previously mixed), and soak the prints in this at seventy-five degrees for six minutes, handling them in the same way as when bleaching. Wash the prints in several changes of water. Fix in hypo solution for one minute. Wash well for five minutes or so. Dry the prints. These bleached prints can then be put aside if desired, and taken out one at a time at intervals when you have half an hour to spare, soaked in water at seventy-five degrees for fifteen minutes, placed on a pad of moist blotting paper, the surface mopped free from water with a pad of soft, clean muslin, when it should be in a condition for easy pigmenting.

Toned or re-developed prints are a pleasing variation. Instead of fixing out the bleached silver, the image may be re-developed with amidol or with sodium sulphide, one grain to an ounce, when, after drying and re-soaking as above, the print may be pigmented as before. The advantages of these are that you can turn a weak flat print into a strong rich one, and you have a visible image to guide you in applying the pigment, which should be thinned down considerably with Roberson's Medium.

I will now try to show the facility with which a print prepared as described can be pigmented. I have here a whole-plate bleached print of a half-length figure against a white background, and I will try to make a decent straight print in about five minutes with the brush. This is on Wellington carbon paper, and takes the ink very freely. (This print was handed round in less than three minutes, and had practically all the detail of the original.) Now I will take a street scene on Wellington rough ordinary paper prepared in a similar way. (This print took much longer, and required much more brush work, and was handed round partly finished in five minutes.)

This next print has been bleached and toned with sodium sulphide, and I will cover up half and pigment the other half to show the richness and quality thus obtained, which, I think, will speak for itself. (The effect of pigmenting upon one-half was most marked, and very easily obtained.)

This last print has been bleached and re-developed with amidol, and I will treat one-half of it in the same way to show the effect.

The surface of a Bromoil print is very delicate, and cannot be handled to any extent. If left to dry naturally, it will curl up as usual, and will probably be spoiled in straightening out again. To avoid this, I mount the still wet print, face upwards,

on a sheet of glass, pasting down the extreme edges only. It will then dry flat and smooth, and when required for mounting or framing, I trim the print while on the glass, and it then lies quite flat and taut, and can be safely fixed to the mount by just a spot of paste at the top corners, or it may be framed without being removed from the glass, and the absolutely flat, smooth surface greatly improves the appearance of the finished print, while it is obvious that any retouching or spotting desired can be much more effectively done while stretched on the glass than on a loose print.

Before closing, I have one other print to show you. This has been treated as described, and is a more or less faulty Bromoil print in sepia ink. Not being satisfied with the effect, I can wash off the pigment with petrol and a rag, as you see here, then, after soaking as before (if dry), it can be again pigmented, as you see, with great ease; and, strangely enough, I find that prints so treated often give a better result the second time than the original.

I have at a previous demonstration here described the brushes and inks which I use. I have several brushes, all of the French pattern, as sold by Sinclair, but really I only use one, No. 14, for all pigmenting purposes, as I find this the best size. I use a very small brush for touching-up, etc., and a very tiny one for picking hairs, etc., off the surface of the print.

The ink I use is a fine lithographic ink; colors, Congo black and Vandyke brown.

The following table sums up the process as I have found it best to work:

Develop with amidol. Fix and wash as usual.

Most suitable bleacher: The one given above.

Bleach in above, at seventy-five degrees Fahrenheit, two minutes.

Rinse in water at same temperature for one minute.

Soak in five per cent sulphuric acid at same temperature six minutes.

Wash in several changes of water for five minutes.

Fix in hypo or tone with soda sulphide, or redevelop with amidol for one minute; then wash in water for five minutes, making twenty minutes in all.

Dry thoroughly.

To pigment: Soak fifteen minutes in water at seventy-five degrees Fahrenheit. Pigment in usual way.

THE KIND OF PRINT TO USE.

On this point Mr. F. J. Mortimer, writing in the "Amateur Photographer," says:

The print must be full of contrast, not altogether lacking in detail, but, above all, it must be fully developed, and the shadows a rich black. Not grey, nor brownish black, nor with a tinge of green, but black.

For the beginner, therefore, a good "plucky" negative is useful if he desires to make such a bromide print.

The bromide print should be the very best fully developed black and white result that the negative can yield.

Development, in fact, should be carried as far as it can go. This means correct exposure. The worker who can make a good bromide print will make good bromoils with certainty.

Secondly: Always develop, if possible, with amidol, and avoid using an acid fixing bath.

Other developers may be used, and the acid fixing bath also, but they introduce elements of uncertainty that their avoidance removes.

THE SALVAGE OF OLD DRY PLATES.

R. H. Baskett writes as follows to "Photography:"

It comes to most amateur photographers at some time or other to have a number of stale plates on hand, which are rendered worthless owing to the bright silver film extending from their edges inwards to a more or less extent. Recently, having a number in this condition, I determined to try our old friend Globe polish upon them; and this I did with excellent results.

Placing the plates one by one, film outwards, in a printing frame, I rubbed the surface of the film with a pad of cotton-wool, upon which I had placed a little salad oil and Globe polish. In less than a minute all the bright silver was removed, and the gelatine surface had taken a fine polish, and was beautifully clean.

After exposure, by magnesium light, in developing them I found a total absence of pinholes, an increase of speed, and decreased halation, which I attributed to the polished surface allowing the light to enter and also escape more easily.

After this cleaning, the plates, although very old, were quite equal to those freshly purchased. So we see there is no need to waste plates because of their being stale.

The question to be asked from this little experiment is, Would it not pay the worker to clean and polish his plates in this way before undertaking very difficult work in interiors, etc.?

Certain it is nothing is lost by doing so, for many faults in negatives are caused by blemishes in the glass or film, and these are noticed at once in the rubbing, and so can be avoided, and in work that is in any way particular additional safety can thus be gained.

A certain amount of opacity is needed in the emulsion for the formation of the picture, but do not the matt surfaces of our plates act as a resist to the action of the light in exposure, and also increase halation by resisting the escape of the reflected light from the surface of the glass, thus decreasing speed and helping halation?

Globe polish is an English polish for metals. Similar articles are on the American market and in my experience act the same.—H. D'A. P.

"GALVANIT."

In a paper by Mr. Augustus Rosenberg, read at the Royal Society of Arts a week or so ago, a new and very remarkable invention was introduced to the public, which invention is likely to have far-reaching, not to say revolutionary, effects. This introduction was "Galvanit," which is the name of a material with which electroplating can be effected in the simplest possible manner. We need only buy a shilling tin of silver, tin, nickel, or cadmium "Galvanit" powder and may then straightway proceed to electroplate any metallic article we like with the aid of nothing beyond a soft cloth and some water. A little powder is put on a piece of clean paper, touched with the cloth which has been moistened with the water, and then the article is rubbed and the plating effected. We tried some tin "Galvanit" on an old cheap stop-watch which, from long carrying in the pocket amongst cash and keys and other sundries, had long lost its nickel plate, and was naked to its shameless brass foundation. In less than five minutes the watch not only looked as good as new, but rather better, for tin plating is more effective than nickel, and very difficult to distinguish from silver. The coating was hard and thick enough to stand a vigorous polishing with rouge. We also tried the effect of plating some brass divided scales, which were so dirty and soiled as to be almost unreadable. "Galvanit" is a cleanser as well as a plater, and in a few minutes our scales were as bright as silver, with every division showing up sharply and clearly. Every fresh application of "Galvanit" adds more metal, and so a few treatments result in a thick coating that will stand plenty of hard wear, and also be a perfect preservative. It does not take long for steel to rust and brass to tarnish in a photographic workshop, which is invariably damp in the neighborhood of the sink, but silver-plated taps, scale pans, plate-racks, etc., immune from rust and proof against most chemicals, need not now be unattainable luxuries, since the expenditure of one shilling and about half an hour of time will produce them. One of the uses for which "Galvanit" is recommended is that of plating copper process blocks, and for this it should be eminently useful. The principle of "Galvanit" is simple enough. The powder contains the essential metal, a dry electrolyte which becomes active on the addition of moisture, and another metal, which appears usually to be magnesium, and acts as an anode. The secondary products formed from the electrolyte (alkalies, acids, etc.) help to clean the metal, while chalk or soapstone, which may be added, helps toward the same result. The effect is almost instantaneous when the metal is clean, but somewhat slower on dirty metal. Grease, varnish, lacquer, or rust are, of course, serious obstacles to the plating process, and should be removed first, even though we find by practical test that "Galvanit" alone will dispose of them in course of time. This, however, involves a waste of plating material and also of time. From what we have said, it will be evident that "Galvanit" is an introduction of very real importance and value. All kinds of plating metals will in time be available, and the cheaper ones, such as zinc and tin, will doubtless find numberless uses. The address of the Galvanit Manufacturing Company is 6 and 7 George Street, Hanover Square, W., London.—"British Journal of Photography."

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

A PASTE FOR LABELS.

A correspondent wants a paste for bottle labels, something that is not to be used for photographs, but something like what the druggists use for labeling the bottles and packages they put out. These pastes seem to have an endless variety, and the ingredients vary from starches to gelatine, and mixtures thereof, including sugar. To these are added a preservative, such as oil of cloves, salicylic acid, or formaldehyde. Caustic soda and nitric acid are sometimes added, with the idea that they are more effective in breaking up the starch granules; and alum is added to make the compound more adhesive. The "Chemist and Druggist" says the simplest is prepared as follows:

Wheat flour	6 ounces
Powdered alum	1 ounce
Cold water	1½ pints

Dissolve the alum in the water, mix with the flour, and cook in an enameled saucepan until translucent. When cool, stir in two drachms of formaldehyde.

A HYPO DISTRIBUTOR.

I was in a darkroom the other day, and I am sorry to say it was a professional's, where the proprietor had in operation a very effective means of distributing hypo throughout the room. When developing, all the plates went into the fixing bath. After a certain length of time they were removed, one by one, and examined. Those that were clearly failures were drained a moment, and then placed on a shelf close at hand. I asked why this was done, and was told that it was intended to clean them all off some day in order to get the clear glass and, consequently, there was no need of washing them. But he never stopped to think that the hypo crystalized out of the film and formed a white powder on the surface, ready to fly about the room, saying nothing about the clearly visible accumulation on the shelf where the drippings had evaporated and left a small bank of hypo behind. These defective negatives should be washed just the same as the others, and, if it is desired to clean them, the operation should be gone through with at once. A tray containing one ounce of bichromate of potash and one ounce of sulphuric acid in twenty ounces of water should be at hand. Place the spoiled negatives therein and, by the time the good negatives are ready for the final rinse and are racked away to dry, the film of the spoiled ones will rinse off under the tap, leaving the glass in a sparkling clean condition, ready to be racked off to dry at the same time.

POSING AND LIGHTING.

I was in a studio the other day, had an engagement with the proprietor, and we left for a little ride out to his ranch. He had no appointments for the afternoon, so left his printer in charge. But, that young man being rather inexperienced and a chance sitter liable to drop in, he referred him to a set of rules pasted up just inside the darkroom door. These, judging from the width of the column, were evidently from some English photographic magazine. They were so good that I copied them off. There are thirteen, as follows:

Long faces: Raise camera and make three-quarter view of face.

Pug nose: Raise camera and lower subject's head.

Large eyes: Three-quarter view of face, looking downward a trifle.

Long neck: High collar, raise camera, lower head; pull up shirt front.

Bald head: Screen top of head with black head screen.

Deep eyes: Plenty of light under eyes from sidelight; lower camera.

Large ears: Rembrandt effect; make three-quarter view of face.

Old people: Seat well away from light, using rather more sidelight.

High cheek-bones: Front, broad light.

Large hands: Usually posed edgeways to the camera.

Babies: Lower camera, use plenty of top, frontlight.

Hollow cheeks: Front sidelight is the best.

Full figures and groups: Mostly front toplight.

Where reference is made to the raising or lowering of the camera, it means to raise or lower it above or below the level of the subject's head; the camera on a level with the head being the normal position.

SAVING SPOILED PRINTS.

An amateur, in the course of his experimenting with various developing papers and developers, acquires, if he is not of a destructive nature, a good supply of prints that are all right with the one exception of greenish or brownish tones. One such friend has a plan whereby he turns them all into handsome, blue-black prints. He simply lays them aside until the collection is of some proportion, and then runs them through a gold toning bath. A large bottle of the concentrated bath costs him only fifty cents, and he saves a few dollars' worth of prints by the simple expedient.

THE URANIUM INTENSIFIER.

Make two solutions, as follows:

(a) Uranium nitrate ..... 30 grains
Water ..... 8 ounces

(b) Ferricyanide of potassium ..... 30 grains
Water ..... 8 ounces

For use, take three ounces of each and add one ounce of glacial acetic acid. Immerse the negative and gently rock the tray until the desired intensity is secured. The result will be a negative of a rich, warm brown color, having a surprising increase of strength if the process has been carried far enough. Avoid soaking the negative in water before treating as is advised with other methods of intensification. In addition to the control one has over the amount of intensification by this process, there is the added advantage that the intensified negative can be reduced again to any desired extent by soaking it in an alkaline solution, made by adding any alkali to a tray of water. Carbonate of soda, ammonia, or the like answers. By using some of this alkali solution on a brush or tuft of cotton, local reduction of the intensified negative can easily be achieved, the result being equal to local intensification of certain parts only; that is, those parts not reduced back to their original density after intensification of the whole.

CONTROL IN CARBON PRINTING.

A Cleveland reader asks how he can secure some control over the results in his carbon printing. The usual method is to somewhat over-expose and then secure the desired results by applying quite hot water to those parts which are required as high lights; or, which are required relatively lighter than they would come by ordinary exposure and development. The water can be used quite hot, hotter than is comfortable for the hands. The same treatment will also save many carbon prints that are over-exposed unintentionally.

THE MERCURY-IODIDE INTENSIFIER.

An Oregon correspondent says that he is unable to obtain mercuric iodide at his local dealers or the drug stores in his town. It is easy to make a stock solution suitable for the purpose by dissolving twenty-five grains of mercuric chloride in seven ounces of water, and adding slowly three hundred minims of a one in ten solution of potassium iodide. The thirty grains of iodide should be well dissolved in the three hundred minims of water and added a little at a time. A red precipitate will form at first; but, as more of the iodide solution is added, it will disappear. As soon as this occurs, the addition should cease. This is the stock solution, and keeps fairly well. For the benefit of our other readers, we would add that, to use this intensifier, take one ounce of the above solution, and add to one hundred and sixty grains of sodium sulphite dissolved in eight ounces of water. Immerse the negative in this and it will gradually gain in density. When sufficiently intensified, remove, wash for three or four minutes, swab with cotton and place in an ordinary developer for about five minutes. A non-staining developer is preferred. Finally, wash for a few minutes and dry.

Club News and Notes

Club Secretaries and others will oblige by giving us reports for this Department.

CALIFORNIA CAMERA CLUB OUTING.

On Sunday, March 13th, the California Camera Club shouldered arms and kodaked a campaign to Lagunitas for a day's outing. About fifty of the Club members and their friends met at the Ferry early in the morning and started on the first outing of the season. The railroad authorities were kind enough to provide a special car at Sausalito that kept the party together and made the trip most enjoyable. Cross-raised a big new American flag near the station for the occasion.

It is really a beautiful place, rough, broken country, creeks winding through the gulches among the redwoods and white birches and brush and bushes. Summer homes nestled all about among the hills, making an ideal place to stroll and tramp about in.

Lunch was served for two miles along one of the creeks, at any place where absolute hunger captured the photographic

ing the bay, the signs were very good for a dirty day, dark, foggy and cold, but on emerging from the first tunnel to the north of Sausalito the sun broke through the fog and changed the looks of things. From that time on it was a real picnic, all hands being on the qui vive for the end of the journey, anxious to begin their scenery shooting. When they were all off and the train out of the way Archer rounded up the crowd before they had time to scatter or stray and photographed them with a panorama camera that he did not know how to use, or if he did his knowledge of it was not visible to the naked eye. The people of Lagunitas feel that they were honored by the visit, and enthusiasm, and with a cup of that good, cold creek water to wash it down, all the French restaurants in San Francisco together couldn't give the complete satisfaction or leave the taste in the mouth that the two-mile table of lunch baskets did, with the creek tumbling over rocks among willows and brush for music and splendid sunshine for a roof overhead.

The last hour before train time they straggled back to the station from every direction, every hill-bend of the road and creek having been taken—every white birch and even the chickens. Mrs. Hitchcock caught a snapshot of Archer having a pet pigeon eat corn out of his mouth, and a party were taken in the Hjule's

pretty summer home, the Hitchcocks and Strobels with their friends being of the party.

The trip homeward was a crowning event, with Crosscup presiding. The party voted the outing a complete success. Auerbach made a short speech and Dr. Fletcher spoke, acted and led the singing like an old-fashioned singing teacher or choir leader of the old days. Going into the station at Sausalito, the entire car helped sing "Good Night Ladies" till the city noticed a picnic party was passing through. As the weather gets steady in its habits for good, the outings will be more frequent, covering all the interesting points within easy distance.

THIRD ANNUAL EXHIBITION OF JAMESTOWN CAMERA CLUB.

The third Annual Exhibition of the Jamestown Camera Club, held in their club rooms in the Arcade Building, Jamestown, New York, March ninth to twelfth, inclusive, was a success in every way. Two hundred and one pictures were shown, the work of over fifty photographers. All parts of the country were represented, as was also England and Germany, these last by loan exhibit by Mr. Fraprie of Boston. The awards in the General Class went to C. F. Bartlett, St. Louis; M. C. Nichols, Jamestown; A. M. Bryson, Montreal; J. H. Cushman, Jamestown; John F. Jones, Toledo; Charles L. Peck, Buffalo, and R. S. Kauffman, two, Wilkes-Barre. In the club contest salon honors were awarded as follows: Marine, Clare J. Clary, Warren, Pennsylvania; Landscape, the same; Animals, Albro H. Hooper, Jamestown; Home Portraiture, Miles C. Nichols, Jamestown, and Genre Class, Alexander Parsons, Jamestown.

CALIFORNIA CAMERA CLUB.

There will be held, at the rooms of the California Camera Club, April twentieth to twenty-third, inclusive, a Kodak Velox Exhibition, open both afternoons and evenings. The address is Commercial Building, 833 Market Street. There will be several hundred pictures, most of them beautiful enlargements of high pictorial quality. They represent scenes and subjects in every land, and the collection is practically the same as the one that has been shown abroad and received such high words of praise from all who have been so fortunate as to have seen these fine examples of photography. Every one who is interested in the possibilities of photography as a pictorial means of expression should make it a point to see these pictures during the exhibition.

OREGON CAMERA CLUB.

The annual print exhibition, the fifteenth, to be given by the Oregon Camera Club, is well assured as another success to the credit of that enterprising body of camera enthusiasts. All the serious workers are reported as taking a keen interest in the coming exhibition, and practically all of them belong to the club. The exact date has not been set at this moment, but it will be probably the first or second week in April. The Oregon Camera Club is one of the few that can hold a successful and well attended exhibition each year, drawing its good attendance without recourse to pictures other than those of its members. As usual, we will reproduce a number of the best pictures together with a report of the displays made.

GREATER MONTREAL CAMERA CLUB.

This is a new club, the first meeting being held on January thirty-first last. There are now over forty members on the roll, and on March first the Club took possession of their handsome quarters in the Guy Block, corner of Guy and St. Catherine Streets. The Club desires to exchange sets of prints and lantern slides with other clubs, and will be pleased to receive catalogues and the like from manufacturers and dealers, particularly those covering new apparatus and material coming on the market. The list of officers is as follows: M. H. Roeder, President; Frank A. Darkin, Vice-President; H. E. Allen, Secretary, and T. B. Longmire, Treasurer. An executive committee of three members, and a membership committee of four, make up the governing body. "Camera Craft" wishes the new Club all success; and, judging from the plan outlined in their folder-prospectus, the hearty support of Montreal amateurs should be assured.

Is Photography Standing Still?

Under the above heading a Fellow of the Royal Photographic Society gives in the London "Evening News" expression to a rather pessimistic view of the situation. While not agreeing fully with the opinions expressed, we believe a note of warning is sounded that it will be well for us to heed. Leaving out that part concerning the election of a new president for the "Royal" and some matter concerning the number of photographic publications, the article reads as follows:

With admirable business acumen the Photographic Salon authorities—known as the "Linked Ring"—asked Mr. George Bernard Shaw to lecture at the last "Salon" on "Photography" a few days before closing.

Now, Mr. Shaw is a photographer of wide experience, and, as a keen observer, knows what real and unreal photographs are, and he did not handle the subject with a velvet glove; in fact, one well-known critic during the discussion which followed Mr. Shaw's remarks said that the "Linked Ring" had been nursing a serpent in its bosom.

Mr. Shaw said quite plainly that photography is on the decline. The truth is not always pleasant, but it has to be faced, and what is true of photography in this country is also true in others, but authorities dread to confess it.

In a famous photographic volume dealing with the picture-making side of photography, published only a few days ago, we have the opinions of many foreign experts, and disconcerting some of them are.

Mr. F. Matthies-Masuren, who reports on Germany, concludes with a lament that pictorial photography there shows no advance on its position ten years ago. The article on Spain sounds a doleful note on the whole; amateur societies do not flourish and publications have to live a languid and unprosperous life. In Australia the conditions are much as in Spain, while M. Demachy, in his admirable article on France, deals with the autochrome and oil processes, which are really by-paths and not pure photography.

What, then, is the cause of the stagnancy in picture-making by photography?

It is simply that many camera workers have tired of pure photography and have introduced into the art many bastard printing processes, by the aid of which they ape the ways of artists and attempt the impossible. As Mr. Shaw said when speaking of some of the newer printing processes, "And very wonderful and terrible are some of the results. The work found in some of the exhibitions ought never to have been shown as good work."

The old-time processes still in use will produce the finest results, clean and beautiful, as for instance, the present-day examples of portraiture by Mr. Furley Lewis.

In course of time, however, some workers thought they were real artists, and as Mr. Shaw said, "Somebody came along with oilshop lampblack and gum, and printed with this, and people thought the effect looked rather artistic—somehow."

The same thing occurred in the other graphic arts, as, for instance, etching. There was a craze for etchings a few years ago—not good etchings, just etchings. They were run after simply because they were masses of scratches and black patches. People liked them, and they talked about them, because of Rembrandt. They liked the bad things as much as the good. In the same way photography has suffered. A reversion to "pure" photography is the only thing that will save it; the time spent in experimental picture making has been lost.

The making of so-called pictorial photographs does not, however, interest five per cent. of camera users. What, then, is the position of photography itself when we put aside exhibition pictures?

Briefly the position of the art is not an enviable one. Opinions differ widely as to the cause, some blaming the picture post card, others the simplifying of the process and the cheapness of apparatus, while some again blame the decrease in the number of photographic journals.

Until photographers give up the hopeless task of trying to imitate the work of artists of the brush and pay attention to photography pure and simple, the present blight on the art will remain.

International Photographic Association

ADDITIONAL ALBUM REPORT.

Too late for inclusion therein came Mr. Wilson's report for the Chief Album Director's report in the last issue. The Stereoscopic Division is reported as being active in a most gratifying degree. Sets of stereoscopic sets are being circulated, not only in this country, but in England, New Zealand and India. Members in the last two countries are displaying an interest that can only result in some fine sets from these distant lands for the edification of our members at home. The Director of the Stereoscopic Division, Harry Gordon Wilson, 4950 Washington Avenue, Chicago, Illinois, will be pleased to hear from any stereo worker who may wish to avail himself of the circulating sets.

TO OUR NEW YORK MEMBERS.

Your attention is called to the fact that you have an enthusiastic State Album Director in the person of your fellow member, Louis R. Murray, of Ogdensburg, New York. He has done all that is possible, and the members should show their appreciation by at least sending him a few of their best prints for the next album. It is not very encouraging to have so little support from his fellow members when one is album director for a State like New York. He is desirous of having the New York Album compare favorably with the best from other States. If you do not want the albums routed to you, send some prints anyway. Have the albums routed to you if possible. It costs but a few cents to send them on. But send in some prints. Make the New York album the best put out by any of the album directors.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Buliding, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4950 Washington Ave., Chicago, Ill.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Hy. C. Ferris, Director Post Card Division, 837 Acoma St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more of their average cards to the Director for approval. On the correspondence side of such cards should be placed the title, together with such data as hour, light, stop, plate, and exposure, if possible. If cards are of the requisite quality, the Director will authorize the placing of the letter "X" after the member's number, indicating membership in the Post Card Division. A new notice will be given under the heading of "Renewals," if desired. Also ask for a new exchange notice when you renew your subscription. When writing the Director requesting reply, kindly enclose stamp. Address, Hy. C. Ferris, 837 Acoma St., Denver, Colo.

George E. Moulthrope, Director Lantern Slide Division, Bristol, Conn.

Edward F. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

MEXICO.

Vice-President—Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

CANADA.

Album Director—C. H. Foster, Kerwood, Ontario, Canada.

Secretary—J. A. Waddell, Kerwood, Ontario, Canada.

FOREIGN SECRETARIES.

French—Charles A. Wargny, 247 Torrence St., Punxsutawney, Pa., U. S. A.

German — George N. Baumiller, Nutwood, Ohio.

ALBUM DIRECTORS.

Alabama—Richard Hines, Jr., 155 State St., Mobile.

Alaska—P. S. Hunt, Valdez.

Colorado—O. E. Aultman, 106 E. Main St., Trinidad.

Connecticut—George E. Moulthrope, Bristol.

Florida—Capt. E. S. Coutant, U. S. Life-Saving Service, Oak Hill.

Illinois—Harry Gordon Wilson, 4950 Washington Ave., Chicago.

Indiana—H. E. Bishop, 1704 College Ave., Indianapolis.

Iowa—Miss Carrie Page, Monticello,

Kansas—H. E. High, R. F. D. No. 1, Wilson.

Kentucky—G. Harrison Truman, 3903 West Broadway St., Louisville.

Maryland—E. G. Hooper, 218 East 20th St., Baltimore.

Massachusetts—John Mardon, 161 Summer St., Boston.

Michigan—W. E. Ziegenfuss, M. D., 327 West Hancock Ave., Detroit.

Minnesota—Leonard A. Williams, St. Cloud.

Mississippi—Emory W. Ross, Institute Rural Station, Edwards.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32nd St., Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor St., Manchester.

New York—Louis R. Murray, 266 Ford St., Ogdensburg.

New Jersey—Burton H. Albee, 140 State St., Hackensack.
North Dakota—Jas. A. Van Kleeck, 619 Second Ave. North, Fargo.
Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.
Oregon—Leonard S. Hopfield, Box 622, McMinnville.
Pennsylvania—William C. Barbour, Sayre.
South Dakota—C. B. Bolles, L. B. 351, Aberdeen.
Texas—Frank Reeves, Graham.
Utah—John C. Swenson, A. B., Provo.
Wisconsin—H. Oliver Bodine, Racine.

STATE SECRETARIES.

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

Kansas—H. H. Gill, Hays City.
Kentucky—Roy J. Sawyer, 1564 Greenup St., Covington.
Minnesota—Charles P. Wegner, St. Cloud.
Mississippi—Willis Proutt, Institute Rural Station, Edwards.
New York—Louis R. Murray, Ogdensburg.
Oregon—F. L. Derby, La Fayette.
Wisconsin—F. W. Freitag, 500 Monument Square, Racine.

NEW MEMBERS.

2347—Mrs. Harold N. Jones, 335 W. Main St., Bozeman, Mont.
Post cards and 5x7, developing paper, of bits of scenery, snow scenes, child pictures, interiors, also odds and ends; for scenes of all kinds or nicely grouped pictures of children, animals, flowers, or any other subject. Class 1.

2348—Chas. E. Preston, Entiat, Wash.
4x5 and 5x7, printing-out and developing papers, of scenic and mountain views; for same and historic subjects. For good work only. Class 1.

2349—J. B. McLaughlin, Box 64, New Kensington, Pa.
2¼x3¼ and 4x5, developing and printing-out papers, of scenery, groups, flashlights, and all kinds of views; for scenery. Some post cards. Class 1.

2350—J. W. Green, Box 486, Paonia, Colo.
Class 2.

2351—Hugh A. Graham, 207 E. 8th St., Traverse City, Mich.
Class 2.

2352—K. L. Stegner, R. F. D. No. 1, Payette, Idaho.
6½x8½ and smaller, developing paper, of landscape, view work, etc.; for post cards of local views and scenery. Class 1.

2353—Ed. Bernier, St. Anne, Ill.
6½x8½, developing paper, of woodland, river and lake views, also rural and village scenes; for marine views and the like, fishing scenes, etc. Class 1.

2354—Howard Bebout, Lock Box 1080, Woodward, Okla.
3¼x5½, developing paper, chiefly of landscapes, buildings and out of door views in general; for anything interesting, post cards included. Class 1.

2355—C. Eugene Barnes, Mulbank, S. Dak.
5x7, developing paper, of genre, portraits, and views made with view of study; for same or postals. Class 1.

2356—C. E. Coley, Lock Box 128, Goldendale, Wash.
5x7, developing paper, of landscape and other views; for any kind of views. Class 1.

2357—Miss Effie F. Mitchell, 1133 E. 16th St., Oakland, Cal.
Class 2.

2358—W. H. Strausburger, Box 90, Weissport, Pa.
Class 2.

2359—Joel Atkinson, Box 10, Sand Lake, Ore.
5x7 and smaller, developing paper, of landscape and marine views; for scenery and marine views, either post cards or larger. Will accept smaller than post cards. Class 1, but send sample exchange first.

2360—Lilian A. Guernsey, 945 Fifth St., Des Moines, Iowa.
Class 2.

2361—Eugene Clifford, Pierce, Idaho.
3¼x5½, developing paper, of mountain scenery, woodland views, streams, and characteristic Western views; for anything except single buildings, in post cards and prints, 5x7 and smaller. Class 1.

2362—Myra Belle Bowen, R. F. D., Sheridan, Ill.
Class 2.

2363—Royden G. Girling, 136 Tillotson St., Trinidad, Colo.
3¼x5½, developing paper, of scenery; for any subjects, post cards only. Class 1.

2364—A. M. Myers, Phillipsburg, Ohio.
3¼x5½, developing paper, of views, portraits, groups and scenes of all kinds; for same. Post cards only. Class 1.

2365—Wm. M. Hastings, care Farm Res., Hospital, Ill.
3¼x5½, developing paper, of landscapes, buildings and miscellaneous subjects; for anything, especially on platinum paper. Class 1.

2366—G. J. Smith, 112 Adams St., Burlington, Vt.
Class 2.

2367—Leslie Lewis, Fairfield, Neb.
3¼x5½, developing paper, of mountain and city scenes, also animals; for post cards or prints not smaller than 3¼x5½. Class 1.

2368—David P. Kane, Kaslo, B. C., Canada.
From 5x7 down to post cards, most all kinds of paper, and autochroms, of mountain and lake scenery; for scenery subjects. Would like lantern slides and autochroms. Privilege of return expected and extended. Class 1.

2369—Frank G. Miller, 200 East Fifth St., Carroll, Iowa.
Post cards, any paper to suit, of local views and scenery from nature. After August 1st will have British Columbia views. Desire scenes from nature, also animals. Class 1.

2370—Albert C. Pieper, 420 Carolina St., Plymouth, Wis.
Class 2.

2371—F. R. Morse, 17 Olyphant Park, Morristown, N. J.
Class 2.

2372—Ezra Holdeman, Gorgona, Canal Zone, Panama.
3¼x5½, developing paper and post cards, of Panama landscapes and Canal work; for good post cards. Class 1.

2373—Mrs. George Nichols, Dinuba, Cal.
3¼x5½, developing paper, of mostly scenery; for same, in post cards only. Class 1.

2374X—O. P. Lynum, 521 W. Heron St., Aberdeen, Wash.
Post cards on developing paper, of landscapes, marines, night scenes, animals, birds, and flowers; for same. Class 1.

2275X—Miss Ethel L. Matlack, R. R. No. 2, Grand Junction, Colo.
Post cards only. Class 1.

2295X—Irwin G. Dillon, Kyle, S. Dak.
5x7 and post cards, developing paper, of Indian life, Bad Land views, and general scenes on an Indian reservation; for most any kind of views, but they must be good. Class 1.

2375—William F. Smith, R. F. D. No. 1, San Jose, Ill.
4x5, on developing paper, of landscape, buildings, groups and flash lights; for post cards and regular prints, especially landscapes and building views. Class 1.

2376—Harry B. Snell, Box 187, Steamboat Springs, Colo.
Class 2.

2377—R. Ronig, Box 1, Leland, Wash.
5x7 and stereos, on glossy developing paper, of landscapes and views in stereo and post cards, for same. Class 1.

2378—P. D. Emmons, care Little Fort Photo Co., Waukegan, Ill.
Class 2.

2379—J. H. Pelzner, Box 31, Route No. 1, Worth, Ill.
Class 2.

2380—R. R. Wilson, Box 77, Elmora, Pa.
Post cards only. Class 1.

scenes, water falls, mountain scenery, ocean going boats, city views and postals; for views from all parts of the world. Class 1.

2382—A. C. Hustin, 37 Woodland Ave., Columbus, Ohio.
Class 2.

2383—Mrs. Eunice E. Rhoads, R. F. D. No. 1, Amity, Ore.
Class 2.

2384—W. E. Herbst, Box 231, Madison, Neb.
5x7 and smaller, on developing paper; for flashlights and home portraiture. Class 1.

2385—C. W. Cornell, 945 N St., Fresno, Cal.
Class 2.

2386—D. J. Bell, M. D., Box 22, Granville, Yukon Ter., Canada.
5x7 and post cards, on printing-out and developing papers, of Yukon and Alaskan general subjects, industrial scenes, landscapes, etc., for prints or post cards of pictorial or instructive interest. Class 1.

2387—Frank J. Horton, Box 627, Goodland, Kan.
Post card size, on developing paper, of views and children; for post cards only. Class 1.

2388—Emma I. Fiske, 167 Massachusetts Ave., East Lexington, Mass.
Class 3.

2389—H. W. Dockrell, care The United Fruit Co., Bocas del Toro, Republic Panama, Central America.
Class 3.

2390—Ernest J. Anderson, 919 Kimber St., Camden, N. J.
2½x4¼ and smaller, on developing and other papers, of athletics, animal studies, farm views, New Jersey and Pennsylvania scenery; for athletic, railroad and college subjects, farm, mountain and general scenery. Class 1.

2391—Henry Murray, Roy, Wash.
2½x4¼, on developing and printing-out papers, of landscapes, portraits, etc., for pictures of any nature, post cards only. Class 1.

2392—John A. Good, 44 Pike St., Covington, Ky.
Class 2.

2393—August Ahrens, 205 Broad St., Warrensburg, Mo.
Class 3.

2394—Harry C. Bach, Pine City, Wash.
Class 2.

2395—Chas. A. Thomas, R. F. D. No. 1, Lewis, Kan.
Post cards and 5x7, for anything of general interest. Class 1.

2396—Forrest Shreve, Drawer L, Tucson, Ariz.
Post cards, 5x7 and smaller, on developing and printing-out papers, of landscapes and general outdoor work, including tropical views from the West Indies, and southwestern desert and mountain scenes; for landscapes and views showing natural vegetation, forest, mountain, desert, prairie and jungle scenes in all parts of the world. Class 1.

2397—Ralph P. Denny, Box 16A, R. R. No. 3, Guthrie, Okla.
Class 3.

2398—L. Briscoe Allen, Port Gibson, Miss.
Class 3.

2399—Chas. A. Kramer, Jordan, Mont.
Class 2.

2400—Ary Obert, Valley, Wis.
Post card size, on developing paper, of scenery, landscapes and portraits; for scenery, landscapes and water scenes. Post cards only. Class 1.

2401—Ralph Burwell, Tippecanoe City, Ohio.
4x5, on developing paper, of landscapes, child subjects, working interiors and general. In Class 1 for child studies only.

2402—F. C. Hollopeter, Kendallville, Ind.
2¼x3¼ to 5x7, on developing paper, of miscellaneous subjects. Post cards for post cards only. Class 1.

2403—Frank Marble, 4 Hancock St., Lynn, Mass.
Lantern slides, for same. Class 1.

1875X—J. B. Shelton, Box 476, Jamestown, N. Dak.
5x7, all kinds of paper, of landscapes, still

2404—A. E. Fyall, Lower Nicola, B. C., Canada.
Class 2.

2405—Max J. Oches, 7400 Woodland Ave., Cleveland, Ohio.
3¼x5½ and 5x7, on developing paper, of landscapes, seascapes, genre, post cards or prints; for same; prints to have white margin, be unmounted, on developing paper, and not larger than 5x7. No post cards. Class 1.

2406—V. G. Heverly, P. O. Building, Center Point, Iowa.
4¼x6½ and 4x5, on developing paper, of landscapes, some genre and animal photography; for post cards or unmounted 4¼x6½ or smaller prints only. Class 1.

2407—Charles J. Noll, Racine College, Racine, Wis.
Class 2.

2408—Vesta C. Honey, East Lansing, Mich.
4x5 and 5x7, on developing paper, of general, pictorial and landscapes; for pictorial and general views, landscapes, and especially animal pictures. Class 1.

2409—Fred H. Walther, 702 Capp St., San Francisco, Cal.
5x7 and smaller, on developing and printing-out papers, of landscapes, seascapes, statues and buildings; also portraits; for all subjects. Class 1.

2410—S. C. Dalton, Granada, Minn.
Class 2.

2411—Mrs. Arthur E. Folsom, 69 Lincoln Ave., Winchendon, Mass.
Class 3.

2412—A. J. Latson, R. F. D. No. 3, Rocky Ford, Colo.
Class 2.

RENEWALS.

625—Julius M. Wendt, 427 First St., Albany, N. Y.
Stereoscopic views, developing paper, of miscellaneous subjects; for same. Class 1.

1093—H. C. Heidrich, 1729 Gates Ave., Brooklyn, N. Y.
Unable to exchange at present. Will give notice when ready to do so.

1600—E. J. Edwards, care E. Winbridge & Co., Queens Road, Bombay, India.
Mr. Edwards reports that he has received a number of post cards from members; but he does not wish to exchange cards, only stereoscopic prints, unmounted. His work is very fine and we would advise members making stereo prints to send him some of their best work and receive some fine stereo prints in return.

1672—A. H. Fenn, 15 Colony St., Meriden, Conn.
Stereo views, from plate negatives, on printing-out paper, of country scenery; for stereo views of natural scenery. Class 1 for sample exchange of stereos only.

1827X—Sam H. Shelstad, Brandt, S. Dak.
Post cards and 4x5, of farm views and scenery; for anything of general interest. Class 1.

1840X—Thos. C. Barbour, Box 111, Gonzales, Tex.
5x7 and post cards, developing paper, of river and general views; for post cards. Class 1.

1841—Annie M. Sullivan, 163 Locksley Ave., Oakland, Cal.
4x5 and 5x7, on developing paper, of flowers and landscapes; for views of general interest. Class 1.

1854—Burdette Harrison, 210 Lock St., Tarentum, Pa.
Post cards and 4x5; for anything of interest. Class 1.

1864—A. G. Lindgren, Verndale, Minn.
3¼x5½, 3½x12, and post cards, developing paper, of Minnesota, Utah, Washington, Oregon, California, and Canadian views; for views of interest, prints preferred. Class 1.

866—Walter M. Duve, 652 E. Dowling St., Kendallville, Ind.
Class 2.

1874—T. B. Haynes, Box 20, Creston, Mont.
Class 2.

2381—Royal M. La Flower, Box 297, Port Angeles, Wash.
2¼x3¼ to 6½x8½, of landscapes, timber

life and animal studies; for post cards of general interest, if good. Class 1.

1895X—Arthur L. Burgess, 183 Jefferson Ave., Columbus, Ohio.
3¼x5½, on developing paper, of marines, landscapes, snow scenes, ray filter work and local views; for same, in post cards only. Class 1.

1899X—Mrs. S. A. Jordan, R. F. D. No. 2, Box 86, Hydro, Okla.
Class 2.

1987X—W. W. Tetlow, East Millstone, N. J.
Post cards, landscapes, river and general views; for post cards only. Class 1.

1988X—Mrs. M. E. Taylor, Garrettsville, Ohio.
Post cards and 4x5, developing paper, of child studies and general landscapes; for same. Class 1.

1921—G. T. Simmons, Sharon, N. Dak.
5x7 to 6½x8½, developing paper, of landscapes and general views; for same. Class 1.

1990X—Armand R. Tibbitts, 402 East Ave., Waukesha, Wis.
Post cards, developing paper, of landscapes and animal studies; for good work along any line. Class 1.

2049X—Mrs. Vercia Louck, Kalona, Iowa.
4x5, printing-out and developing papers, of anything interesting to an amateur; for the same in post cards. Class 1.

2071—Brugh Werner, 454 N. Church St., Decatur, Ill.
Stereoscopic views, for the same. Class 1.

2146X—L. E. Millea, 357 Main St., Norwich, Conn.
Class 2.

2146X—H. W. Tyron, 203 N. Railroad St., Kendalville, Ind.
Post cards, 5x7 and 8x10, developing paper, of good pictures; for anything of interest. Class 1.

2151X—Pres. Fidler, Box 169, Weed, Cal.
Changes from Class 1 to Class 2.

2176X—Phil. A. Friedell, Box 102, Drummond, Mont.
Post cards only. Class 1.

2200X—Norman L. Sims, 5 Allman Ave., San Rafael, Cal.
Post cards only. Class 1.

2269—Carl Farnsworth, Litchfield, Neb.
3¼x4¼, 3¼x5½, and 4¼x6½, developing paper, of landscapes, creek and river scenes, summer and winter, puppy, coyote, sod houses, fast trains, etc.; for subjects of general interest, views preferred in either prints or post cards; the latter preferred. Class 1.

2321—Robert F. Wittbecker, Lock Box 79, Lansing, Iowa.
Has been quite ill and is not yet fully recovered. In future will undertake to exchange post cards only. For post cards. Class 1.

CHANGES OF ADDRESS.

1936—E. P. Burnett, Jonesboro, Lee County, N. C.
(Was Providence, R. I.)

2064—T. J. Sadileh, 1019 N. 22d, South Omaha, Neb.
(Was Plymouth, Neb.)

2144X—W. M. Horton, Alvord, Tex.
Has changed address several times since the first of the year and mail may have been lost. Members will kindly report any delinquency and it will be made good.

2213—E. H. Webber, Pierre, S. D.
(Was Orleans, Neb.)

CORRECTIONS.

2294—Hans Simons, Manderson, S. D.
I. P. A. number incorrectly given in the March issue as 2344.

Photo-Secession Exhibitions

We not only have Mr. Stieglitz to thank for his inspiring "Camera Work," but, in the exhibitions held at the Photo-Secession Galleries, he places us under a still greater obligation. Quoting from the New York "Post" of December twenty-fourth:

Were it not for the exhibitions at the Little Galleries of the Photo-Secession, at 291 Fifth Avenue, the New York public that does not get an opportunity of going abroad would miss a great deal of what the more advanced men are doing or have done recently in art on the continent of Europe. True, some of the exhibitions have been of a startling nature, but revolutionary movements have to be startling to be effective, and it is only by these apparently startling shocks that art is got out of those commercial grooves into which it drifts every now and then. The latest collection that Alfred Stieglitz has gathered into the galleries is of some thirty lithographs by Henri de Toulouse-Lautrec, a Frenchman of whom great things were expected when he died, in 1902, at the age of thirty-five. It is the first exhibition of his work that has been held in this country.

The above is only a portion of the flattering comment, and an example only from one source; the "Sun," "Mail," "Globe," and others, devoting considerable space thereto. Dealing with the Custom House and the idiosyncrasies of the individual artists makes a definite announcement of dates impossible, but the calendar of coming exhibitions will include color photographs by Eduard J. Steichen; water-colors, pastels and etchings by John Marin; drawings and etchings by Gordon Graig; drawings by Auguste Rodin; drawings by Henri Matisse; paintings by Alfred Mauer, by Laurence Fellows, by Arthur Carles; drawings by Elie Nadelmann; photographs by Annie W. Brigman, by Frank Eugene; etchings by Elen Theslupp, and paintings by Max Weber, by Patric Bruce, and by Putnam Brinley. Philadelphia, New York, San Francisco, Virginia, London, Paris, Poland, and Finland, are all represented in the above calendar by artists of eminence in their chosen medium.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

"FROM POVERTY TO POWER."

We told you about a book that you had to read slowly; that is, one that you wanted to make last as long as it would, by reading a little now, and a little another hour, and again still later enjoying its companionship. Then we told you about a book that you started to read and couldn't lay down until it was finished. But here, under the above title, we have a book by James Allen, of another kind. It is, in its calm assurance of the power of accomplishment, as inspiring as the words of a valued advisor whose wisdom and kindness we never doubt. One reads, and then goes back and reads again, much as one would constantly ask for further enlightenment were new truths being placed before him by a speaker. You do not wish to lay it aside, and you do not want to finish it at once. It is a book of inspiration. The price is one dollar. Sheldon University Press, Libertyville, Illinois.

A POPULAR SIZE.

We would like to call the attention of our readers to the advertisement of the J. M. Hamilton Camera Company that appears on one of the pages in the front of the magazine. The 4¼x6½ size is one that is fast becoming popular. It is just the thing for post card work, allowing the worker to use some selective ability in making the best possible picture from a negative a little larger than is absolutely required. Many of the best post card view men use as large as 5x7 for that reason alone. The full size of the plate is very desirable for group and view work, producing a picture of nice proportions and one that can be printed on its own size of paper or upon half sheets of 6½x8½ paper. The Hamilton cameras are well made and exceedingly good value. They are supplied with a sliding front that acts as a rising front when taking vertical pictures, and of course it is the vertical pictures that require this movement most often. The address of the firm is Waterloo, Iowa. Write them for catalogue C before investing in a new camera for view and post card work.

A NEW KODAK PORTFOLIO.

There has just reached our desk a copy of the portfolio of the last Kodak Advertising Contest. It contains handsome reproductions of the pictures winning prizes in the competition; and, as an inspiration to the camera worker, nothing better could be found along this line. The applicability of photography to advertising purposes has long been a recognized fact, and its suitability to photographic advertising is particularly evident. The effective advertising done by the Eastman Kodak Company has always been well illustrated, and the pictures in this new portfolio show very plainly that there will be diminution of effectiveness in that direction. The company will send a copy of the portfolio to anybody who is sufficiently interested to write for it. Address Eastman Kodak Company, Rochester, New York.

THE POPULARITY OF SELTONA PAPER.

Mr. Lewis advises us that the sales of Seltona paper for last year more than double those of 1908, and the sales that year were most gratifying for a product so new in this country. It is now on sale by the Western Photo Supply Company, 82 Third Street, San Francisco; Gailey Supply Company, Seattle, Washington, and the Megeath Stationery Company, Omaha, Nebraska. The Barnet Super-Speed plates have also made a great hit; users reporting them as the finest they have ever used. The new Barnet C T (cold tone) lantern plate is a new introduction that is gaining in favor, while the older or C G (contact gaslight) plate, like the Seltona paper, has more than doubled in sales for the last year. There is a coupon on their advertisement in the advertising section that our readers will do well to clip and send to the agent, J. L. Lewis, 379 Sixth Avenue, New York.

SEPIAS ON KRUXO IN FIRST DEVELOPMENT.

The following formula, while an excellent one, is, of course, only supplementary to the directions given in that valuable little booklet, "Kruxo and How to Use It," which the firm will gladly send upon request:

Water	40 ounces
Hydroquinone	30 grains
Sodium sulphite (Kruxo)	300 grains
Eikonogen	20 grains
Sodium carbonate (Kruxo)	300 grains

To forty ounces of this sepia developer, ready for use, add from five to eight drops, no more, of a ten-per-cent solution of potassium iodide, according to the degree of contrast in the negative. This will cut out the reddish tones, producing rich browns and sepias rivaling carbon and platinum in softness and brilliancy. It should be borne in mind that good sepias can only be made from negatives of good density and contrast. To keep in a stock solution, dissolve the above chemicals in ten ounces of water instead of in forty ounces; and, when wanted for use, add three ounces of water to each ounce of the stock solution. The formula published in "Kruxo and How to Use It" calls for one drop of a saturated solution of potassium bromide to each ounce of dilute developer. Occasionally it will be found necessary to double this quantity of bromide. Send for a copy of the booklet, as it contains much valuable information. Address: Kruxo Photo Paper Company, 109-113 First Avenue, Cedar Rapids, Iowa.

"KODAK AT THE NORTH POLE."

This is a handsome booklet, printed in the usual elegant style of the Kodak Press, with pages nearly as large as our own, illustrated with over twenty-five handsome reproductions of photographs of arctic scenes. If your dealer has not got them, and they go very fast, send direct to the Eastman Kodak Company, Rochester, New York, and get a copy. They advise that they will gladly send them upon request to all who are interested enough to apply. The illustrations are of exceptional value and interest. The pictures are by Commander Peary, Anthony Fiala and Harry Whitney. The text is most informative, being an account of his experiences with a kodak and while commander of the Ziegler Polar Expedition of 1903.

SOME LOCAL VIEWS IN POST CARDS.

The coming summer will no doubt be the best season post cards have ever had, and wideawake dealers should early lay in a stock of new cards. No rack is complete without some local views; and, if you are in doubt where to place your order for them, write the National Colortype Company, Cincinnati, Ohio, for their samples. They claim to be the first makers of hand-colored cards in America; they are old enough to know good cards and young enough to skilfully prepare them.

A RELIABLE LINE.

Those who realize the value of quality in photographic apparatus will appreciate the beautiful workmanship and fine mechanical features of the large line of Korona cameras and view cameras made by the Gundlach-Manhattan Optical Company, of Rochester, New York. It is characteristic of this old concern to make quality the first consideration, while long experience and the most complete facilities enable them to keep their prices reasonable, that is, no higher than is asked for goods of less merit.

The Gundlach-Manhattan Optical Company enjoy the distinction of being the only makers of high-grade lenses in the camera business, and those knowing anything about Gundlach lenses will tell you that the firm's cameras are equipped with better lenses than many other cameras on the market. In fact, this company has been famous for the quality of its lenses for twenty-five years; first, as makers of microscope objectives, then telescopes, and later, photographic lenses and prism binoculars. Hundreds of thousands of their lenses have been used for surveying instruments, surgical instruments, and other purposes.

The Series II, Turner-Reich lens, is unquestionably one of the best Convertible Anastigmat lenses made; and no one can dispute the right of the Convertible Anastigmat to the title of the most useful lens of the Anastigmat class. This company is responsible for an achievement in pho-

tographic optics in producing their Pancratic Tele-Photo lens, which excels the inconvenient tele-photo attachment. The Pancratic Tele-Photo lens has already interested hundreds of photographers in the possibilities of tele-photography.

We may also mention the Korona Adapter for film packs, which is simple, efficient, and inexpensive. For further particulars of the many desirable goods made by this company, refer to their catalogues, which will be sent upon request.

LANDES ENLARGING LAMP.

This lamp will certainly do much to popularize the making of bromide enlargements by the amateur, as it enables anyone to make enlargements in any room which can be darkened. Use your own camera; simply attach it to the lamp and you can make enlargements of any size. Write to George Murphy, Incorporated, 59 East Ninth Street, New York.

THE ONLY BOOK.

We are in receipt of a copy of the new and revised edition of the "A B C of Photography," from the publishers, Burke & James, Chicago, Illinois.

The book is a wonder; it is the book of all books for the amateur photographer; there is not another one that explains so well and thoroughly the various phases of photographic processes that puzzle and vex the amateur worker. We ought to know because our editor wrote it himself, and recently revised it, all by himself. Every dealer in the country will have it in stock by the time this reaches our readers; that is, if he has your best interest at heart. If he hasn't, send your order, and twenty-five cents, direct to Burke & James, 607 to 631 Jackson Boulevard, Chicago, Illinois; or, Hirsch & Kaiser, 218 Post Street, San Francisco.

NEW MOUNTS AND FOLDERS.

The handsome new catalogue of the California Card Manufacturing Company has just reached our desk. It is an exceptionally fine piece of printing, as befits a list of cards, folders, and other goods in their line, of such exceptional merit. Dealers and professionals should send at once for a copy, the latter being assured that samples will be sent of such special lines as they may wish to see, although the leading dealers are in a position to show samples of a full line of the firm's goods. In this catalogue is listed only new goods and such of the older lines as seem indispensable to a large number of studios. The list is handsomely illustrated, the exact thickness shown, together with a full description of each card or folder. Write for a copy, addressing California Card Manufacturing Company, San Francisco, California.

AN IMPROVED POST CARD MACHINE.

In a letter of recent date we are favored with a new and heretofore unbelievable price-list for photographic post cards in large quantities. The greatly reduced price is made possible, we are told, by the introduction of a new and original machine which enormously cuts down the cost of handling and increases the quality of the prints. The machine is briefly described as follows:

Five hundred cards are placed in the hopper or feed box at one end of the machine and are automatically fed into the printing frame over any negative. After the correct exposure is derived by trial and the timer set for the number of seconds required the motor is started and the work of printing, developing and fixing is carried on mechanically, the cards finally emerging at the completion of a cycle and dropping into large rotary washing tanks, from which they are taken at the end of an hour, drained and put into improved drying ovens. Here they are left until bone dry, and, when removed, have a high gloss not obtainable with ordinary drying, lie perfectly flat and are guaranteed not to curl at any time.

The beauty of the process is that each one of a thousand cards is exactly uniform in tone, color and depth of printing, an impossible feature with the old style hand printing and tray development; and the extremely low price puts photographic cards in competition with the popular halftone cards and opens a new field for the enterprising jobber or dealer in picture post cards.

If you are interested in this line, it will pay you to write to The Photo Craft Shop, 849-851 Ellis Street, San Francisco, whose advertisement appears on another page, for price list and descriptive matter, which will be sent free to post card dealers and photographers on request.

Vol. XVII No. 5 MAY, 1910 Price, 10 Cen

Camera Craft

San Francisco, California

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PAPER

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Camera Craft

A PHOTOGRAPHIC MONTHLY

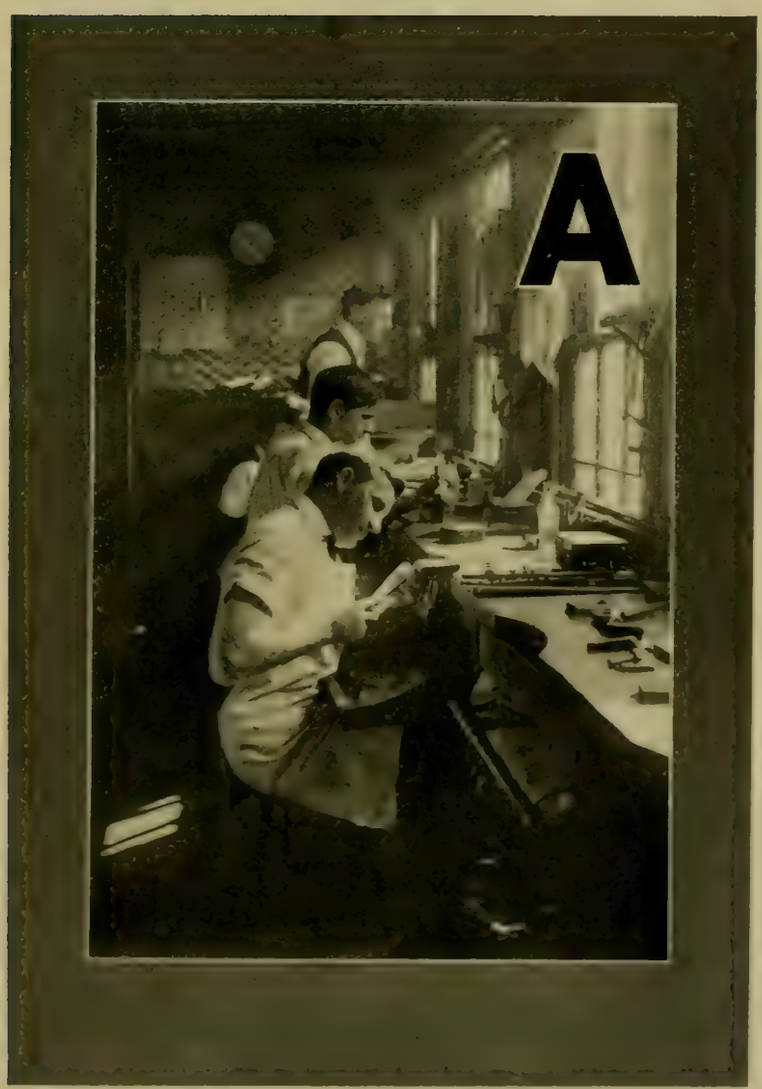
FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, MAY, 1910. No. 5

Securing Sunlight Effects

By Henry Bowé



WHERE SUNLIGHT STREAMS.

ATMOSPHERIC effects play an important part in the pictorial photography of today, and the rendition of atmosphere is an important part of the pictorialist's work. It is but a few years since that a photograph was not expected to reveal any indication of atmosphere; in fact, it was all destroyed in the effort to produce absolute sharpness and detail in every plane of the picture. Today, this quality of absolute sharpness throughout is sufficient to condemn any picture, as far as artistic quality is concerned. The atmosphere that we prize so highly in our pictures today would have been looked upon as a blemish, not so many years ago.

In studying the work of artists, I noticed that, in their paintings of interiors, considerable prominence was often given to the rays of light coming in through windows and illuminating the immediate atmosphere surrounding them. In many cases, this treatment was the making of the picture. Realizing the importance of atmosphere, and appreciating the beauty of this illuminated atmosphere effect, I tried to secure it with my camera. Try as I would, the result was halation and failure.

In the open air, where the natural elements are beyond our control, we must simply bide our time and await a favorable opportunity to secure the desired effect. Indoors, the difficulties assume different proportions, varying with the light, subject, arrangement, and general conditions.

In the jewelry factory where I am employed, I noticed that, on sunny days when the refining furnace was in operation, the effect of the slight vapor of the flux, as it reached the row of benches along the south wall, caused the sunlight there to have a beautiful and illuminating effect. There was a soft haze that became illuminated and atmospheric as it was permeated by the rays of sunlight streaming in through the windows.

This led me to do a little experimenting along the line suggested by the flux vapor of the refining furnace. I found that, by heating a piece of sheet tin or iron over a light flame or alcohol lamp, and sprinkling it with granulated sal ammoniac, the same vapor effect in the atmosphere was produced. A luminous mist is created, with very little odor and perfectly harmless, and it remains for some time if the room is not too well ventilated. The density of this artificial atmosphere can be regulated by the amount of the sal ammoniac used. It should be burned in front of the camera and near the floor, and diffused about by fanning it in the directions wanted. Its greatest

THE FIRST EXPERIMENT.

A CORNER OF THE WORKSHOP.
By HENRY BOWE.

efficiency is, of course, apparent upon sunny days, when the rays of sunlight can be seen more or less distinctly outlined according to the amount of artificial atmosphere created.

"The First Experiment" shows an exaggerated effect, caused by burning too much of the chemical. Only a very little of the vapor is needed, as it is intensified by the camera. My disappointment in trying to secure the same effects in a natural way led me to overdo the thing in this first trial. It is forty feet from the location of the camera to the end of the room, with six successive windows at the right. "A Corner of the Workshop" includes only fifteen feet from the camera position to the wire netting shown in the background. The ceiling is almost black and the floor is covered with tar paper. Only a little smoke was used in this case, and the effect is more natural. Although an ordinary plate was used, and used without any backing, there is an entire absence of halation. Neither of the negatives has been doctored in the least, and the prints from which the blocks are made are straight prints on gas-light paper. The almost entire absence of halation in both the examples, a little in the one having the least artificial atmosphere, is no doubt due entirely to this mist or atmosphere absorbing the major portion of the light.

The windows face directly south, and both the pictures were taken in January, between 10:30 and 11 a. m. Standard Extra plates were used, the lens stopped down to f-16. Twelve seconds' exposure was given the one with the denser atmosphere, while "A Corner of the Workshop" was given seven seconds. The pyro-soda formula that goes with the plates was used in developing them.

When attempting these rays of sunlight, I find that it is best to have the rays of sunlight falling a little towards the camera in order to give good relief to articles which might be in their path. This can be noticed quite plainly in the machinery at the left of the picture in the first example. The proper angle is quite important, but a little study of the matter will make this all plain.

I have never seen this idea in print, and therefore offer it as a suggestion to those who may desire the better to reproduce these pleasing effects of sun-lit atmosphere in the production of pictorial photography.

Art is only utterance. It must express something; and the vital question is, What does it express? The daily association with honest, manly, real work, with art which, whether or not it be of the utmost refinement, is at least sincere and individual, must exert on us an influence less demoralizing than the continual contact with falsity, pretense, and affectation. The fact that we may be wholly unconscious of the influence to which we are subject does not destroy its effect. The fresh air is tonic, whether we feel it to be so or not; and the germs of disease bred in foul air are none the less fatal, though our nostrils be not sufficiently delicate to detect the poison we breathe.—Lewis Foreman Day.

A Little Lesson In Lighting

By Percy King

The Prize Article That Wins a Wold Air Brush This Month

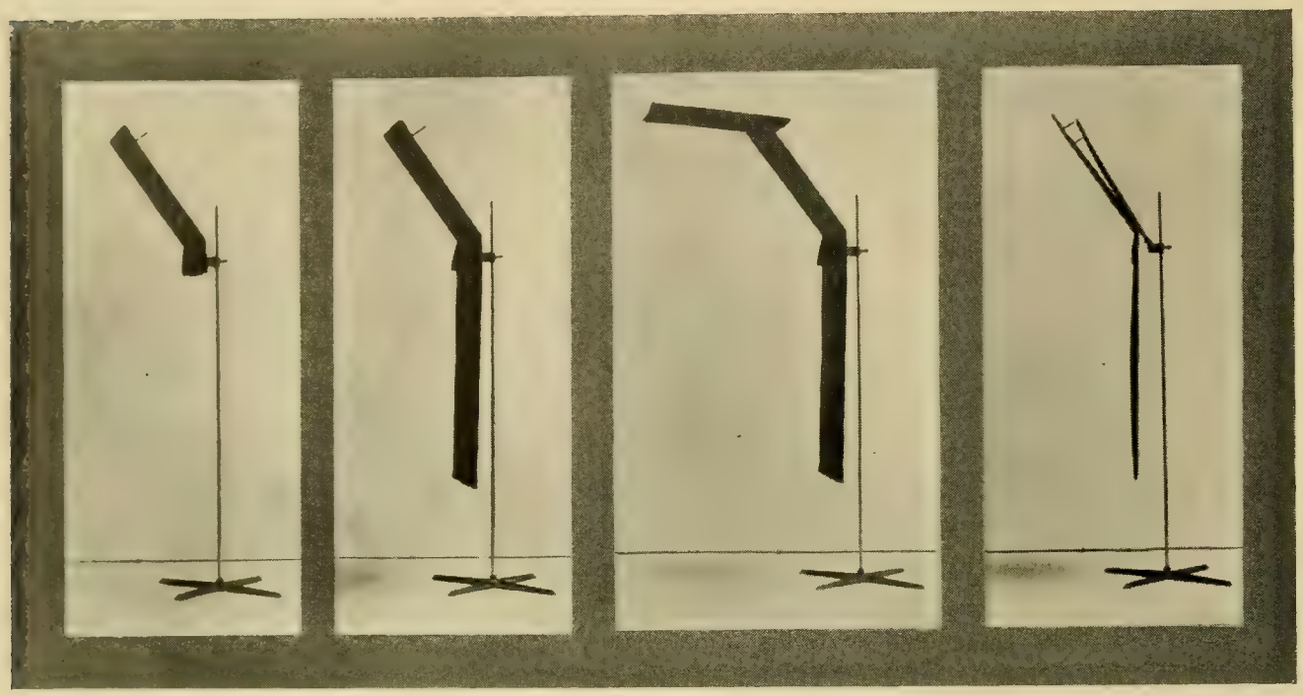
There has been so much written on the subject of lighting that I doubt if I can give much that has not already been hashed over and over by others. At the same time, I believe that half the photographers throughout the country know little more about the subject today than they did the first time they put their heads under the focusing cloth. At least, the work they turn out seems to indicate that such a situation exists. Possibly, by putting the matter in different form and by using a few simple illustrations, I may be able to arouse an interest in the subject that will lead a portion of them to realize the importance of the subject.

In the first place, one should have a light so constructed that the style of work wanted can be easily produced. The construction of the skylight is, I fear, often denied proper consideration when a studio is put in. Plans are laid out for an attractive reception room and convenient dressing rooms; even the workrooms are given some thought; leaving the remaining space to be converted into an operating room. The result is an unsuitable light with which the average operator must contend, while, at the same time, he is expected to produce good work. Many seem to think that a light is a light, no matter how constructed, no matter how many cross lights are introduced, and no matter from where or at what angle the light comes. It is a light; the operator ought to be able to do anything under it; and few operators will try to help matters by some simple method of screening or controlling their light.

I once visited a studio in Boston where the proprietor had given the light some study before putting it in, and what was the result? He had a light that, with one or two screens, would allow him to get any effect he desired; he was simply master, at all times, of any light that entered his operating room. The room itself was 30x60 feet; the light starting twelve feet from the rear wall, two and one-half feet from the floor, and was eighteen feet wide. It extended straight upward five feet as a side light, and then eighteen feet at an angle of about forty degrees, as a top light. It was all ground glass, except a strip four feet wide across the lower part of the top light, which was clear glass. All the curtains were opaque. The twelve feet back of the light allowed control of the tone of the backgrounds and gave more atmospheric effect than would be possible with the grounds close to the subjects. A certain studio in Philadelphia, where the light was designed for bust and three-quarter figures only, was about as near perfect as any I ever had the pleasure of demonstrating under. The room was about 20x30 feet, with the light, 8x8 clear glass, directly in the center of one of the longer sides, perpendicular, and started four feet from the floor.

The operator realizes, or should realize, that all subjects cannot be lighted the same. Every face is different from every other, and many of them require their own special lighting to bring out their best points.

Special lightings must be made to get the best results attainable. To adopt at once the best lighting, the one best suited to the subject, the operator must have full control of the light. One must first study the light being used and become its master. Then, when the sitter presents himself, he will know just what to do, will not have to push his subject this way and that for ten minutes before a place is found where it is thought the lighting will answer. But how can one master his light? By using such means as have been worked out and placed at his disposal with the endorsement of many of the leading photographers of this country as well as abroad. I refer most



MIDDLE SECTION. WITH CURTAIN. WITH TOP SECTION. TOP SECTION BACK.

particularly to the Percy King Light Controller, a device that in its perfected form is the result of my own experiments under all kinds of light during an experience extending over a number of years. As can be seen in the illustrations, it consists of an iron upright, one-half inch in diameter, set in an iron base or foot. The framework is of one-eighth inch wire, covered with black cloth. One could, of course, construct one with the aid of the local blacksmith; but it would be a crude and unsatisfactory affair, costing, in the end, as much if not more than the well-made and substantial article under the name given, by George Murphy, Incorporated, 59 East Ninth Street, New York. In buying the manufactured article, one also avoids any danger of infringing the patents, and I would advise their buying, rather than an attempt to construct a less satisfactory substitute.

With the aid of the illustrations herewith, I will try to give an idea as to how the Controller is used. I used it for over a year before it was placed on the market. It is, of course, impossible for either myself or the manufacturer to supply brains along with it, and I do not think so doing is necessary, believing most photographers have as much as I have; but I have visited studios where they had one of the Controllers, but did not know how to use it, simply because the operator had not given it a half hour's study. They expected it to do the same for them that it did for others,

SHOWING VARIOUS ADJUSTMENTS BY SHIFTING HORIZONTALLY.

without the use of their brains. If the reader will carefully go over the description of how I use it in the several cases illustrated herewith, and then make a few trials himself, he will know as much about it as I do, and find that there is not a lighting that cannot be made with it, and in a surprisingly short time. It will soon become, if not as essential, as important a factor in the production of good work as the camera. Many of the best

WITHOUT CONTROLLER. WITH CONTROLLER.

WITHOUT CONTROLLER. TREATMENT OF SHOULDERS. WITH CONTROLLER

photographers have told me that they would not think of making a sitting without using it to improve the lighting.

As shown, the Controller is simple in construction, light in weight, and does not get out of order. It is a screen, made in three sections, the frames being covered with any kind of material desired. For the usual skylight, side, or side and top light, I prefer opaque cloth. For a window light, or an extra small light, I prefer black cheese cloth, keeping one or two extra pieces 24x24 at hand to be fastened on when I want the screens more opaque. Supplied with small hooks, these extra pieces are instantly applied to the frames. The middle section of the Light Controller is 24x24, fastened to a bar, which in turn is held by a clutch that slides up and down on the upright support. Using this clutch, this section can be placed at any angle, and at any height up to six feet. From the lower edge of this section falls

WITHOUT CONTROLLER. TREATMENT OF WHITE DRAPERY. WITH CONTROLLER.

WITHOUT CONTROLLER. TREATMENT OF LINE LIGHTING. WITH CONTROLLER.

a curtain screen that can be moved horizontally, as shown in some of the illustrations. Fastened from the top of the middle section is another screen of the same size that can be moved horizontally the same as the lower one, and also extended out over the sitter as shown in the illustration herewith. This latter position is very useful in the case of bald heads, light hair, large white feathers, line lightings, and other cases that the operator will soon learn to recognize.

The light under which these illustrations were made is eighteen feet wide. It starts two feet from the floor, runs straight up five feet as a side light, and then twelve feet as a top light at an angle of forty-five degrees. It is all ground glass except a strip of clear glass, three feet wide, along bottom of top light. The side light was wide open. The top light had five curtains. The last curtain on the top, that is, the one furthest away from the subject, was open, the next down to about ten feet of side light, the next to about eight feet, and the rest down to about four feet. The height of the controller screen is determined by the entrance of direct light; higher or lower, as case may be. The two white strips on the floor are placed to show the position of the sitter in relation to the light, one being parallel to the light and the other at right angles, forming a cross. A sheet of white paper was placed in the position of the camera when the portraits were made. It has, unfortunately, been trimmed partially off in two of the illustrations, but the corners shown will suffice.

Do not use the top section thrown forward and over the sitter, as shown in one of the illustrations, except when needed for bald heads and other cases as mentioned above. It can be removed if desired, but the best plan is to fold it back over the middle section, where it is always ready for use and runs no risk of becoming misplaced. See the illustration showing treatment of shoulders. So used, the holding back of the shoulders in low-neck dress is accomplished, and keeping the strong light from the neck saves a lot of retouching. For line lighting, as shown, and for three-fourth figures, always use the Controller as near the subject as possible without

getting it on the plate. The reason the screens are made only twenty-four inches wide is to avoid shading the background and destroying the atmospheric effect in the pictures.

And using the Controller does not increase the exposure; in fact, it seems to shorten it, if anything. The shortening of the exposure is quite evident in cases where the desired lighting is secured with the Controller instead of by closing down the light. The case is entirely different when an ordinary opaque screen is brought between the sitter and the light. The light does not get around it to the same degree, the background is shaded and all atmosphere lost. Use your light, both top and side, well open, learn to use the Controller intelligently according to the light you are using, and I can assure you that there will be a vast improvement in the quality of your work and you will accomplish it with much more certainty and much less trouble than by any other means.

More About Coloring Photographs

By Edgell R. Plaisted

To me, Mr. Fisher's recent article on this subject was all too brief; and, while my own knowledge concerning it is only that of an amateur, the following is submitted in the belief that it also may be of help to beginners in this most fascinating side line.

Small contact prints of postal size were my first efforts in colors, and they sold so fast the supply could not keep up with the demand; but, after a little, what had been fun became very much indeed like work, for photography is first of all my recreation. For this reason I quit the small pictures and turned my attention entirely to landscape bromides ranging from 8x10 to 16x20.

For pictures of this description, rough paper is by far the best; and, while broad washes of color on skies or still water can be more easily managed while the print is wet, detail and foreground can often be worked up more effectively on a dry surface. A given depth of tint can then be secured with lighter washes, giving more brilliancy; for deeper tones which have partially soaked into the paper have a muddying effect. No sizing is needed on such paper, and even the smoother sorts work better without it in my hands.

A light drawing board covered with oilcloth is my easel, for a wet print clings closely to it and a dry one can be held by glass push-pins at the corners. This stands where it receives a good light and where I can conveniently step back a few feet now and then to observe the general effect as the work progresses—for this is a very different matter from getting detail which is pleasing at close range, though both can be had with proper management.

As the pale greenish tint of glass sometimes affects the more delicate tones of distance when the picture is framed, it is well to place a glass over

it for trial before calling it completed. A marine generally gains in values by the addition of the glass; but, if the modification it causes is injurious, it can be overcome by a slight strengthening of the colors which seem most affected.

The Japanese transparent water colors can be had in nearly or quite all the standard named colors, as well as in the "deep" yellow, "dark" blue, and "light" green of the Eastman booklet, and many of these are very useful, if not absolutely necessary. Among those I should not like to be without are brown ochre, dark tan, yellow earth, neutral tint, cerulean and cobalt blues, and moss, sap, sea, and emerald greens. With me, the dissolved colors in bottles underwent a slight change, but this may have been caused by the use of water not distilled.

It is a most excellent plan to go to nature for our ideas of color—if we bear in mind that she uses different pigments on a different foundation and make allowance accordingly. A colored photo which exactly matched nature, shade for shade, would hardly be pleasing when hung on the wall, and even the best autochromes are by no means faithful renderings of nature's exact tints and colors.

Scene painters exaggerate to a degree which seems even gross when viewed at close range in order to get an effect which will appear realistic under artificial conditions, and almost any good painting is evidence that the general effect can be improved by taking some license with mere detail, for we find in such colors "which never were on sea or land."

Nature doesn't always appear to the best advantage, and therefore isn't a safe guide to follow if we want to get the best possible effect by applying colors to our black-and-white copy of her outlines and her lights and shadows. For instance, we often see at early evening a sky showing rumpled streaks of pink and primrose and azure, and very beautiful it may be; but on our paper sky such streaks would be far less pleasing than softly blended and merging shades.

In my collection are two beautiful scenes on Lake Champlain and Lake George, where dark pines on a rocky promontory stand out against the sky or from nearby islands show in sharp contrast to the distant mountains beyond them. Brilliant yellow alone, used over black, will give very nearly the dull green of old pines, and either yellow or green used full strength direct from the leaflet and laid on in light strokes will give effects not possible with any amount of washes.

Not all prints will color effectively, and those which generally give the best results have brilliant deep shadows and clean, snappy high lights, though dull tones may be made very beautiful if rightly managed. The use of sepia-toned prints on Royal bromide may be made to yield a fair imitation of an oil painting when colored, and for large landscapes it would seem a much rougher paper than has yet been offered would be helpful in getting a water-color effect on black-and-white. The Lumiere Company do make such a paper, having a surface like burlap, but it is too soft working to serve the purpose just named. An application of the cereate made by melting together equal parts of beeswax, turpentine, and oil of lavender will

brighten a colored print as much as it livens up a dull sepia; but it may also have the effect of increasing the resemblance to a "chromo," which is the last thing desired.

Finally, if in spite of all efforts to get the effect desired the result is still unsatisfactory, stand the print up under a gentle flow of water and soak the colors off. Not all of them will come out of the paper entirely, but so little will remain that a new start along different lines can be made. Watch the print closely during the first part of this washing process, for it has happened more than once with me that the very effect I was after appeared of itself when the water had removed only a small portion of the color, but had softened and blended what remained.

In case too much color has been applied and still it is not desired to remove it all, or to blend it further, the application of a clean wet blotter will remove more or less, according to the time it is left in contact with the print. It hardly seems necessary to add that the blotter can be cut to the shape of any particular spot of color which it is desired to tone down, and is not of necessity applied to the entire picture. The color manufacturers also offer a liquid for bleaching out small spots of too intense color, to be applied with a brush and taken off with a blotter, but I have not given it a trial.

To Title One's Negatives

By George H. Knight, London, England

I have just received the January number of "Camera Craft," which is always welcome, and find an article, "To Title One's Negatives." As an old-time photographer, I suggest the following as a simpler and more practical method:

Write or print on a strip of architect's tracing paper, with any good waterproof ink, the title required, trim as small as possible, damp the film of negative where most suitable (the more transparent the part the better), and press the written title face downwards on the damp film with a wad of cotton or a soft handkerchief, and the result will be all that is required. Should the lettering print too dark, cover the title with one or two thicknesses of tissue paper on back of negative.

Plate-Washing Device

By F. C. Wilbour

Secure a large earthen jar and bore a hole in the side, near the bottom, about one-fourth inch in diameter. I use one of three-gallon size. Place the plates to be washed in a plate rack and put this in the jar near the hole, the edges of the plates toward it. Let water run into the jar from a tap, holding a finger over the hole until the water covers the top edge of the plates, and then regulate the flow of water from the tap so it balances the flow of waste water from the hole. This method will be found to wash plates very quickly, as the hypo is drawn off from the bottom of the jar. Plate racks are cheap, and one will accommodate two sizes of plates.

Prints vs. Transparencies

A Plea for Color Photography on a Paper Basis

By Henry J. Cromley, F. R. P. S.

For the benefit of our readers, we would advise that Mr. Cromley is, perhaps, the best known worker in Color Photography in England. He is Honorary Secretary of the Society of Color Photographers, and has held that office, we believe, since the Society was first organized some years ago. The Society circulates portfolios containing the work of its members in every known photographic color process; and this alone should make its secretary capable of speaking authoritatively on the subject. However, Mr. Cromley has gained his knowledge in a more practical manner. His "Oranges and Nuts," a still life study in natural colors, has won first prize wherever shown, and is conceded to be the best example of color photography ever produced. Another example of his work, a portrait, has been adjudged the best photographic portrait obtained by color photography. In our next issue we will have another and more intimate and exhaustive exposition of the subject by the same author, dealing with Color Photography on Paper as a Commercial Proposition.

Now that screen-plate methods of color photography have ceased to be a star item on the bill, is it not time for us to hark back to the original proposition, for which all workers in photographic processes in all time have almost pathetically yearned? I refer to natural-color prints on paper.

Not for a moment do I wish to entirely exclude screen-plate methods from my attention; as a scientific feature in photography they are exceedingly interesting; as a ready means for making more or less accurate records for many purposes they have proved themselves useful; and, as a basis from which three-color half-tones may be made, they offer valuable possibilities; but these considerations do not appeal to the average worker. The photographer who has sufficient enthusiasm about him to raise himself out of the rut will always aim at making pictures which will reflect the individuality of their creator. It is to the persistent practicing of this principle in their work that we are able to recognize men and women who stand out as leaders in the photographic world. Who, making any pretense of an intimate acquaintance with the work of these leaders, would fail to recognize, in their exhibition pictures, the hand of Gertrude Kasebier, Mrs. Barton, Steichen, Demarchy, Steiglitz, Duhrkoop, Reutlinger, or Strauss, without the necessity of referring to a catalogue? The personality of these and others who are in the front ranks, either as amateur or professional workers, is certainly and unmistakably stamped upon the pictures they produce. But, is such individuality possible, and can such talent be recognized among workers in screen-plate transparencies? I think not.

Beautiful as the best screen-plate pictures really are, and successful as the process is, as the outcome of the ingenious application of a scientific principle, the only person truly calling for recognition is the manufacturer of the plate upon which the picture is made; and to him I bow most respectfully. The person who exposes the plate and develops and finishes it, according to the unerring instructions carefully worked out for his guidance, is little more than a willing slave to a new law which is almost as autocratic as the ancient laws of the Medes and Persians; he can have no will of his own; the success of his work depends upon the correct translation of a set

of instructions, and the experience gained, maybe through years of painstaking work in ordinary photography, counts for but very little.

Now, in the making of color prints on paper, the worker is a law unto himself. He cannot make successful prints without impressing upon them his own personality and character; speaking from an artistic as well as from a technical standpoint.

As Secretary of the Society of Colour Photographers, it is no vain boast for me to say that I am able to recognize the authorship of any color print sent to me for inspection or for folio circulation by our members from all parts of the world; I know these members intimately through their work.

Who, with any love for art, fails to recognize the master touch of the great painters wherever their canvases may be met with? We admire and seem to understand the personality of the artist through his work. In a relative degree the same will apply to work in color photography. Apart from composition, either in the selection or arrangement of the subject, which in itself will exhibit the degree of refinement to which the worker's art education has been carried, or the blending and massing of colors, which will indicate the finer instincts of his nature in his ability to appreciate the beauty of color under varied conditions; the technic of his productions will reveal to the observer the amount of that subtle quality in his make-up which some one has defined as "the faculty for taking infinite pains," and of which Dryden writes, it "must be born and never can be taught."

I admit that even in screen-plate transparency work the first-mentioned qualities may be observed, but only in pictures on a paper base can the latter be appreciated.

In common with all true means of artistic expression, color photography engages many of the higher qualities of the mind; and no one can engage in it seriously without coming under the spell of its refining influence.

But, the reader may observe, is there nothing to be said for the utilitarian side of this matter? Yes, I have quite a great deal to say as to the commercial possibilities of color photography on paper; but that is another story, which I will be willing to tell when the opportunity affords.

THE WATER CARRIER ARIZONA — By INA L. COOK

Beginners' Difficulties in Home Portraiture

By F. Morris Steadman

Author of "Home Portraiture," the Aaba Exposure Scale and "Steadman's Complete Exposure Method and Home Portrait Helps"

The greatest obstacle in successfully carrying out any new and untried work with a reasonable amount of expedition and skill is the exaggerated idea of the difficulties involved, the mystery of the unknown. We see an artisan deftly perform some seemingly intricate and apparently difficult piece of work and we think he must be bringing into play a concentration of attention quite remarkable, when the truth of the matter is that his mind may be on an entirely different subject, the work being performed automatically by his practiced hands. Any work is made easy by the acquirement of this automatic action of the hand and mind that results from repeated performance of the various steps involved. One can learn how, learn the theory of any method, from a book; but the feeling that the work is difficult will remain until the work is actually in hand. Then, as familiarity is acquired, the hands acquire an aptitude that is almost automatic, one that makes any conscious application of the mind almost unnecessary.

A child, in learning to walk, does so only by the closest application of its attention, but rapidly acquires the ability to walk or run without giving the matter the least thought. The use of the hands is acquired in the same manner. The hands are but tools; and, in photography, the camera is the auxiliary tool, much as is any hand tool that the skilled craftsman in any other line may use. A full knowledge of the camera, its mechanism, the lens and its stops, the shutter and its mechanism, must be acquired. The camera must be placed on its tripod and quickly and accurately made to cover the subject, and the desired focus obtained. The stops should be fully understood and the right one selected almost without conscious thought, correct exposure determined quickly and with entire confidence and then given with exactness at the proper moment. In other words, one must, to quote from an article in these pages some years ago, "learn to use his camera as he does a knife and fork." When all this mechanical part becomes automatic to such an extent that the mind is left free to employ itself with the subject being photographed, some degree of success can be looked for in the results; not otherwise, except perhaps by mere luck or good fortune.

To illustrate: I was recently trying to help a lady amateur make a portrait with her kodak. Although she had used the instrument for over two years, she had never employed a tripod or made a time exposure, confining herself entirely to snapshots in bright sunlight. It would be interesting to know the percentage of kodak users who never get beyond the snapshot stage. My own belief is that it is about ninety-five per cent. But, to return, we had located the subject in the finder, the focus was obtained, and everything ready, when I found the lady very carefully examining the

A HOME PORTRAIT.

shutter, as I supposed, for the purpose of ascertaining the correct method of giving a time exposure. Suddenly she raised her head and asked: "Did I do it right?" She had been so absorbed in the mechanism of the shutter that the exposure had been made without recognizing the necessity of giving the subject some slight consideration at least. In fact, had the subject risen and walked away a few seconds before the exposure, she would have been unaware of the fact and made the exposure just the same. This is, of course, an exceptional case; but the condition is c l o s e l y related to those in which the photographer is so fully engaged with the manipulation of the camera that the sitter is given but the slightest superficial attention possible under the circumstances.

It is an undeniable fact that, in doing portrait work, the photographer must be in close mental accord with the subject if the results are to be successful. The lighting and posing must be arranged and then relegated to the past, as far as the mind is concerned, even as the mechanism of the camera is not allowed to obtrude; and, at the moment of making the exposure, the subconscious mind only is engaged with the time of the exposure. The attention must be given to the subject's expression, or, if it be a child, its lack of movement and pleasing expression combined. In taking a group of several persons, particularly if children are included, the photographer must be able to sweep with his eye each face, each pair of hands, and do it free from any conscious attention to the camera or the exposure about to be made. When everything is right, and not until, the plate is exposed for the correct time as automatically as one would take a longer or shorter step to avoid some slight obstruction when walking.

The beginner, then, must know his camera, the diaphragms of his lens, and the movements of his shutter, so perfectly as to be able to use them mechanically while giving his undivided attention to the subject. Then, and then only, can he hope to secure pictures that are unmoved and with the

expression right. Practice, and practice only, can bring about this condition. He must learn to use a tripod, make time exposures, measure the strength of the light, learn to count seconds accurately, and make his exposures correctly. Methodical practice will soon place one where all these things are done automatically. If you would eliminate the problem of exposure, you must use a "method" in exposing. Any problem solved, at once becomes a trouble eliminated. And another matter: The kodak and Brownie are omnipresent. To do portrait work with these, they must be used comparatively close to the subject. In fact, they must be used at a certain determined distance, and a few inches error means an image out of focus. This fact causes a fear of inaccuracy, a feeling of uncertainty, that can only be overcome by the habitual use of a tape measure. An ordinary pocket tape measure should be made a part of one's outfit if portraiture is to be attempted. If the camera is a fixed-focus one, a portrait attachment, a small supplementary lens c o s t i n g about fifty cents, is absolutely essential for bust pictures. Many of the small folding cameras are so constructed that the lens cannot be focused for objects nearer than six feet. They will require a portrait attachment as well. Where the lens can be extended beyond the six-foot mark, one should make for himself an additional distance scale for the nearer distances, up to the full allowable extension of the camera or to the distance required for a large head nearly filling the size of plate or film being used. Few shutters give accurately the time shown on their scale, but we can disregard this fact in home portrait work, as the exposures are generally long enough to require the use of the time mechanism. However, accuracy must obtain in the exposures actually given, as well as in all other of the camera manipulations. This takes us back to a proper method of counting time. The most practical method of counting time is to use a sentence having five syllables. Naught-one-half-and-one answers this re-

A WINDOW LIGHTING.

Jerusalem under snow, for the first time in many years, on March 12th last. The Dome at the right is that of the Mosque of Omar, the site of Solomon's Temple. Photographed by American Colony, Jerusalem.

quirement. It will be seen that, like the five fingers of the hand, the five syllables enclose four spaces. Repeating this sentence in an ordinary conversational speed, if the bulb, with the shutter set at "T" or time, is pressed as "naught" is spoken, and again as the last syllable is spoken, the exposure will be exactly one second. Additional seconds are counted by continuing to say, one-half-and-two, one-half-and-three, and so on for the required number, closing the shutter on the last word spoken, which word will be the number of seconds given. Pressing the bulb as one starts with "naught," and again as the third syllable, or "half," is spoken, gives one-half second. In order to acquire the correct speed in counting seconds, one should practice by watching the second hand of a watch while counting seconds for a half minute or more, keeping speed with the pace of the hand around the small dial.

Using a tape measure for focusing greatly simplifies the work. The tape has a ring on the end, and this should go over some projection on the front of the camera and its distance from the zero mark on the tape so shifted that the zero mark comes directly flush with the front rim of the lens. If there is no projecting part of the camera front, such as an upright support for the front, a small tack can be driven into the body of the camera. Supposing that it has been found that four feet is the desired distance for the large head that it is desired to make, the lens is set at the four-foot mark

View from Mount Scopus, near Jerusalem, showing mountains under snow. The view is made looking east, showing the Dead Sea and the Mountains of Moab beyond. Photographed by American Colony, Jerusalem.

on the scale, the ring is placed over the tack or projection, and the tape measure extended to the face of the subject with the tape in hand and the thumb nail on the four-foot mark. If the distance is too great or too small, the camera is moved accordingly. It is advisable to use some sort of a tripod stay to facilitate this moving about of the camera. A set of strong wire hooks and eyes between each of the tripod legs near the top answers admirably. If a smaller head is required, something showing more of the figure, and previous experiment has shown that five feet is the proper distance. The lens is set at that distance, the tape measure used as before, and all fear as to results being unsharp is avoided.

This additional scale for short distances is easily made by the worker, if his camera permits of extension beyond the six-foot mark. The back is removed and a strip of ground glass placed against the slides over which the film travels, and held in place with a couple of rubber bands. A head of the desired size is focused carefully, the tape measure brought into play, and the exact distance to the face of the sitter measured. If the distance is not in even feet or half feet, it might be advisable to change to the nearest such, moving the camera slightly to do this. Then focus again and make a mark where the pointer comes and scratch in the distance. One then is always prepared to get a sharply focused head of just that size by setting the lens at that particular mark, and setting the camera just that distance

from the subject's face. And what is of more importance, it is all done so easily and, after a little practice, with little or no thought being given to the subject.

My method of determining the intensity of the light and from that the correct exposure is given fully in my book, "Home Portraiture," and in the home portrait section of "Modern Way in Picture Making," published by the Eastman Kodak Company. It is also fairly well described in an article by me in the last issue of "Camera Craft." In both of the above-mentioned books will be found my method of counting time, fully described. The importance of doing both these things cannot be overestimated. Many workers pay a high price for an f-6.8 lens to replace one working at f-8, in order to secure the higher speed. An exposure of four seconds with the latter or f-8 lens wide open becomes one second when using the former or high-priced lens with its larger opening. But the advantage so gained is practically annulled if the worker has no definite knowledge of time intervals. Without some correct method of counting time and an exact and reliable means of determining the exposure, the extra speed of the high-priced lens is of little value.

Master these things; make them a part of your mentality. You can learn to count seconds as thoughtlessly as you breathe. With practice the whole thing becomes simple and easy. Each operation is done mechanically, automatically, and the mind is left free to attend to the important business of securing a good expression in the subject. And do not be satisfied with guessing at the right exposure, or guessing at the exposure actually given. Know both; it is easy to do so; in fact, it is folly to do otherwise. Every "guess" at the exposure is a serious handicap to all the rest of the work. It is a "slap in the face" to all that has been done in standardizing emulsions, unifying stop values, and increasing the speed of lenses. An intelligent child of ten, with a correct exposure method and a little coaching, can learn, in one day, to expose more correctly than can the greatest photographic "rule of thumb" expert with his years of experience. Apply the same contention to the matter of distances. If I were to say that a child can learn, in one day, to measure distances with a rule and a little help, better than the man who has never used one, but who has practiced guessing all his life, no one would dispute my statement.

And it all sifts down to this: To practice photography intelligently, no step can be neglected. Round out your ability by completing the circle of things required to be known. Then, practice, practice, practice, until the mechanical part of the work takes care of itself. Then you will find your mind free to reach out after the essentials in the making of good pictures, such as expression, composition, and other requisites of the best work.

Art is the sensitive plate in the dark camera of history, which records both the mental and physical features of humanity without prejudice when all other sources of light are shut out.—Walter Crane.

Photographing an Electric Storm

By T. J. Patterson

During the summer of 1908, I made a three months' tour of the high Sierras in the region of Kings River Canyon, Middle Fork of Kings River, and Tehipite Valley. I took with me a complete photographic outfit and a dark-room tent, in which to develop my plates. During the latter part of July, the canyon was visited by the most severe electric storm known in twenty years. Dark masses of clouds obscured the heavens and enveloped the high summits; brilliant and almost continuous flashes of lightning revealed the glory and grandeur of the scene, while deafening peals of reverberating thunder rolled down the great gorge. Grand Sentinel shot her fiery bolts at North Dome, who answered through her misty shroud with a blinding flash and the resounding roars of her splendid artillery. Rain fell in torrents; three distinct fires were set by electricity during the storm; a mighty avalanche came roaring and crashing down from the summit of the Grand Sentinel; in its mad descent it carried with it great trees and swept hundreds of tons of massive rock and earth into the river, completely damming it off for a time. It rent the air with terrific noise, portentous of the end of the world, and filled one with an awful sense of impending danger. In the afternoons of several successive days, this storm continued to return, and rare photographic opportunities were offered during

ELECTRIC STORM ON GRAND SENTINEL. COPYRIGHTED 1908. By T. J. PATTERSON.

ELECTRIC STORM IN KINGS. RIVER CANYON. COPYRIGHTED 1909, By T. J. PATTERSON.

its progress; the air was crisp and clear and the heavens were decked with matchless cloud effects. I lost no opportunity and spared no amount of labor and hardship to secure the accompanying photographs. I regret my

THUNDERSTORM AT HAPPY CAMP. COPYRIGHTED 1908, By T. J. PATTERSON.

inability to record the splendid electrical display; but the pictures will convey to the reader something of the grandeur and sublimity of this storm. Thankful am I for the privilege of witnessing it. Most impressive of all was the storm on the Grand Sentinel; the picture shows the east, middle, and west domes of this great summit. The following September, we went to the Middle Fork of Kings River and Tehipite Valley, and on this occasion we were again visited by a severe electric storm at Happy Camp, as the accompanying photograph will show.

This canyon has not the rugged grandeur of the South Fork, but a more beautiful, restful place cannot be found in all the Sierras. The beauty and grandeur of Tehipite's dome surpassed all else on the trip; no tongue or pen can picture it, neither can the faithful camera. I think it the most magnificent thing in the world of mountain scenery.

To one who has never witnessed an electric storm in the high mountains, these photographs may seem overdrawn and too dark; but, unnatural as they may seem, they are true to the conditions.

TEHIPITE DOME FROM KING'S RIVER.

An Acid-Alum Fixing Bath

By George A. Price

The formula given below can be used in two ways. One can either mix up the full amount and have it on hand; or, mix up a quantity of the sulphite, acid and alum, labeling it "Hardener," and add one ounce of this to every ten ounces of a one in four hypo bath when wanted for use. If used in this last way, the "one in four" hypo bath can be made a little stronger by cutting down the amount of water a little, as the water used in compounding the hardener dilutes the bath a little. For the complete bath, the formula is:

Water	128 ounces
Hypo	32 ounces
Sodium sulphite (crystals)	4 ounces
Acetic acid No. 8	5 ounces
Alum (powdered)	1½ ounces

In summer increase the alum to two or two and one-half ounces. Dissolve the chemicals in the order given.

To make the hardener so as to have only one small stock solution, take:

Water	28 ounces
Sodium sulphite (crystals)	4 ounces
Acetic acid No. 8	5 ounces
Alum (powdered)	1½ to 2½ ounces

Use more or less alum, according to the weather, as suggested above, and dissolve chemicals in the order given. With this acid-alum bath, used either way, as the worker finds most convenient, there will be a gratifying absence of stains in either negatives or prints. Compounded in either way, it keeps indefinitely. One pint will fix fifty 4x5 or cabinet prints. Chrome alum can be used if preferred.

Although I have had no occasion to use it since adopting the above formula for a fixing bath, I keep a bottle of the following clearing solution on hand. The formula is given for the benefit of readers who may be getting yellowish negatives by using pyro or through other causes. Try it and you will be pleased with the results.

Water	20 ounces
Alum (powdered)	1 ounce
Sulphuric acid	1 drachm

Immerse negatives in this solution until clear, and then rinse well to remove the alum, which might crystalize out and cause a white deposit on the film. It is otherwise perfectly harmless; and, in addition to removing yellow stains, it will remove the brown spots sometimes caused by a trace of iron or rust in the water used.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, MAY, 1910. No. 5

Dr. John Nicol Passes Away

It is with the deepest regret that we learn of the death of Dr. John Nicol, one who has no doubt held the position of photographic editor longer than any other man. He was the editor of the "Photographic Beacon," of Chicago, for five or six years, going, in 1896, to "American Amateur Photography," now merged in the "American Photography," of Boston; his name appearing in both these publications during the time as an editor. He was born in Forfarshire, Scotland, July fourth, 1828. His death occurred at Clifton Springs, New York, March thirteenth, 1910. Educated as a chemist, he early turned his attention to the development of photography. There was perhaps no one with a more practical and intimate acquaintance with the every detail of photographic advancement from the time of its discovery until the present than Dr. Nicol. Loved and respected by all who knew him, and the circle of his acquaintanceship was wide, his passing will leave a void that well cannot be filled.

That Advertising Contest

We had hoped to announce the result of the contest this month; but, on going over the ballots, a number were found that were not filled out so that they could be rightly credited. As the senders had sent them in in all good faith, it was decided that they be sent back and the senders asked to make their choice more clear so that full justice could be done. The announcement will be made in the next issue, the name of the firm, the prize awarded, and the name of the winner.

Mr. Prince in San Francisco

Mr. Fred W. Prince, so long and favorably known to us as city agent of the Santa Fe Railroad, and later as lecturer for the associated California promotion bodies, has been in the city for a few weeks. He is leaving about the fifteenth on an extended lecture tour for the Harriman systems, exploiting the beauties and grandeur of our California scenery. Mr. Prince's well-known ability as a lecturer, his exceptional skill as a photographer, combined with his genial personality, assure him a measure of success in his chosen field that cannot be other than most gratifying, both to himself and those interested in his work.

Mr. Irwin To Be Here

J. W Erwin, one of the most popular and highly respected of the "Old Guard" of the California Camera Club, is expected to reach this city about the middle of June, enjoying a short stay at that time. Since his

return from England, Mr. Erwin has been lecturing for the Harriman systems, and the thousands who have enjoyed his lectures before the Camera Club and elsewhere in this city can understand the appreciation which his work has received. He has always shown a keen interest in the welfare of the Club and will no doubt favor it with a lecture during his stay. That he will have a hearty welcome from his old friends and fellow members goes without saying. As president of the club for two terms, he earned for himself an amount of universal approbation rarely accorded the holder of that rather trying office.

Mr. Finley Again in Good Health

The many friends of William L. Finley, lecturer and field agent of the National Association of Audubon Societies, will be pleased to learn that he is again able to take up his photographic work. He was taken ill while here, had malarial fever, which held him in a hospital at Riverside for two weeks, and another attack upon his arrival at Tucson, Arizona. Writing under date of April fifteenth, he advises that he is fast returning to his usual good health and that he is starting out with every expectation of getting some good material there during the next two months.

More "Honest Lenses At An Honest Price"

Months and months ago we learned, through a four-page "list" that costs fifty cents a year, that Lens Nehring had induced the Scientific Lens Company to continue the manufacture of lenses from his formulae and patents. This "Lens Company" must be quite powerless in the face of Mr. Nehring's wonderful persuasive powers. As further evidence along this line, a circular letter, under date of November nineteenth, advises that the photographic department of the Scientific Lens Company, its "plant and formulae," have been sold to Alfred Koehler. Mr. Koehler, we are told, was "selected" by Mr. Nehring as the most desirable successor; and that, "in selecting him as my successor, I feel that I have kept faith with the fraternity." We are not advised as to the name or nature of this "fraternity," possibly because it is obviously unnecessary. Mr. Nehring's whole-souled generosity and his confidence in the existence of a further supply of confiding souls is clearly shown by the reckless manner in which he asks "all my friends and users of my lenses to transfer their confidence to Mr. Alfred Koehler." Observe the lavish prodigality embodied in this request, which, if complied with, leaves Mr. Nehring without even the confidence of his friends, let alone that of the users of his lenses. Pending the printing of a "higher price list," these honest lenses can be obtained at the old honest prices; Mr. Koehler going to the trouble of testing and guaranteeing them, "honest lenses," it would seem, not being above suspicion. We assume that the new prices will, although higher than the present "honest" ones, comply with the standard of honesty enjoyed by the lenses. If any of our readers have any confidence in the Scientific Lens Company, Lens Nehring, or C. Nehring, they will kindly transfer it to Mr. Koehler. Mr. Nehring no longer needs it, and Mr. Koehler is, no doubt, entitled to it under the conditions of the sale.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

OZOBROME—RECENT MODIFICATIONS.

Mr. Manly, the inventor of the ozobrome process, writing in "Photography," describes the making of ozobromes in two colors. This is hardly a recent modification, as I described it in full in "Photo Era" of May, 1909, and again most fully in "Camera Craft" of October of the same year, where those interested may find all particulars. It is one of the three ways in which two-colored prints may be produced, and in some respects the best. It is gratifying to me, as the pioneer in this field, to note that my work is appreciated, if unacknowledged, for I note that a two-color bromide exhibition was recently given in an English town. Two other uses of ozobrome are thus described by Mr. Manly:

Ozobromes on Wood.

"Venesta — three-ply birch — is a very handy and practical wood to use for this purpose. The surface should be carefully sandpapered and coated twice with the following sizing solution:

Gelatine	1 ounce
Water	20 ounces
Chrome alum solution, 20 grains to the ounce.....	1 ounce

The gelatine is soaked in the water for an hour or two, and then dissolved in a water bath, over a fire. When the solution is quite hot (nearly boiling) the chrome alum solution is added, drop by drop, with constant stirring.

Or the wood can be painted with the special canvas priming that is prepared by Ozobrome, Ltd., and then sized. The manipulation is the same as in the ordinary ozobrome process, the wood being treated as the transfer paper.

Ozobromes on Canvas.

Unprimed canvas is stretched upon a frame and coated with a special priming preparation. After drying, the primed surface is sized with the gelatine solution given above.

In making the contact between the impressed plaster and the canvas, the surface of the canvas should be floated for about a minute in water warmed to about 70 to 80 degrees Fahrenheit, and the frame placed upon a table, when the plaster can be applied and squeegeed. After squeegeeing the surface, the frame must be turned over and the back of the canvas squeegeed with a roller squeegee. The plaster and canvas should remain in contact for from three-quarters to one hour, and in developing, the backing of the plaster should not be pulled away until it nearly floats off. The frame should not be submerged in the developing water; but the development instead should be carried out by splashing the warm water on to the canvas supported outside the developing tank.

SENSITISING PANCHROMATIC PLATES.

I have previously pointed out the value of washed panchromatic plates, which, though having short keeping qualities, are much more sensitive and rapid than the commercial article. The chief difficulty in their production is the usual lack of a proper drying box. Professor Manias, in an article in the "Photo Revue," after showing that the suggestion of using a spirit or acetone bath gave results not altogether satisfactory, mentions that he tried drying by means of placing in a box with dry calcium chloride. This also had disadvantages, but a combination of the two gave perfect results. His description, vide "British Journal of Photography," is as follows:

"But after numerous attempts, made under different conditions, I found that with the most energetic sensitisers (pinachrome and pinacyanol) it was difficult to obtain plates free from markings, even though the plates were washed for half an hour after sensitising.

"It is difficult to find a satisfactory explanation of this, but it would appear that

the energetic drying produced by contact with absolutely dry air renders the surface of the plate less permeable, and it is possible that a certain amount of moisture still remains in the lower part of the film.

This condition of things would not occur when using a method such as that of Miethe, but, at the same time, it may be pointed out that drying with chloride of calcium has proved very suitable for plates sensitised with ethyl-violet or with erythrosine, of which something is said below.

"In order to secure a drying process capable of giving satisfactory results without a special drying cupboard I have endeavored to combine the use of an alcohol sensitising bath with a method of drying by calcium chloride, and have obtained absolutely perfect results by this process. The following is the method of procedure:

"Plates of the extra-rapid type are placed in the sensitising bath in absolute darkness. The time which usually is sufficient for sensitising is from two to three minutes, but in working according to the method now to be described it has been found that this time is too short. The plates should be left at least fifteen minutes in the sensitising bath, during which time they require no attention. One is thus certain of securing a uniform sensitising throughout the film, whatever the plates employed, and whatever the character of the emulsion film. After this treatment the plates are transferred to a large tank containing plain water, or, better still, are placed to wash for a few minutes in a stream of running water. They are then placed in a dish containing ninety-five per cent alcohol, and a minute later are removed and placed in the calcium chloride drying box. At the end of two or three hours the plates will be perfectly dry and ready for use. The alcohol can be used several times, it being necessary only to replenish it from time to time with a fair proportion of fresh alcohol of ninety-five per cent. The alcohol bath becomes strongly colored. This coloration does not mean that the alcohol is dissolving a large quantity of the dye, but arises from the fact that the isocyanine dyes color alcohol much more strongly than water.

"The following is the formula which I prefer for the panchromatic sensitising of plates:

Ethyl-violet (Badische)	1 gm.
Erythrosine	½ gm.
Alcohol, 95 per cent.....	500 ccs.
Water (distilled)	500 ccs.

For use, two cubic centimetres of this bath are mixed with one-half cubic centimetre of ammonia and one hundred cubic centimetres of distilled water.

"This bath is a slightly modified form of that recommended by Valenta several years ago. Valenta also employed eosine, but I have not found with this addition, either, any advantage.

"For sensitising with pinachrome I have employed the usual formula, namely:

Pinachrome	1 gm.
Alcohol, 95 per cent.....	500 ccs.
Water (distilled)	500 ccs.

For use, two cubic centimetres of this bath are added to one hundred cubic centimetres of water. This quantity, one hundred cubic centimetres, suffices for sensitising two plates 7x5 inches. The addition of one-half cubic centimetre ammonia to the bath may be made, but is not absolutely necessary. Ammonia slightly increases the sensitising action, without otherwise modifying it, but the plates thus sensitised do not keep quite as well, and they show a greater tendency to fog, especially when drying has not been so efficiently done. For this reason I prefer to use the plain pinachrome bath without ammonia.

"As regards the results which are obtained by these two baths, the following may be stated: The first bath is very economical. As already noted, it does not require, during the drying process, the same degree of attention as the pinachrome bath. So far as concerns the manipulation of the plates, both baths require the same degree of care, but the intensity of sensitising is much less than with pinachrome.

"If spectrum photographs made with the prism spectrograph be taken, it will be seen that the plates sensitised with pinachrome give a band which extends from the ultra-violet up to the extreme red, and has only two small minima, one between G and F in the blue-green and the other between D and E in the yellow-green. On the other hand, plates sensitised with ethyl-violet and erythrosine give a spectrum which goes slightly further than D (yellow), with a rather pronounced minimum between G and F.

"Giving identical exposures, the region between F in the green and the orange part of the spectrum is much less intense with the ethyl-violet and erythrosine than with pinachrome. It should be added that pinachrome produces a much more energetic action as regards reducing the sensitiveness in the blue and violet. Comparing spectrum photographs made through the filters used in three-color photography it will be seen that there is a considerable difference in the result under the orange green. The difference is less pronounced in the case of the green portion. The result behind the orange screen is weaker, and does not extend so far as in the case of the ethyl-violet plates, and the time of exposure is about twice as long.

"The differences which are noticed when making spectrum photographs show that the plates sensitised by one or other of the two formulæ give results which are quite distinct in practical three-color work. In the first place, plates sensitised with the ethyl-violet and erythrosine require exposure through the red screen at least twice as long as plates sensitised with pinachrome, but in spite of this the yellow-red and orange do not come quite as well as with the pinachrome plates.

RESTORING OLD AND SPOILT BROMIDE AND GASLIGHT PAPERS.

A. J. Garner, in "Amateur Photographer and Focus," gives a modified formula for the above purpose, and further states that paper so treated may be dried for future use. The new formula is briefly as follows: The spoilt paper, no matter how badly fogged, is soaked for a minute in potassium permanganate, five grains; sulphuric acid, thirty minims; water, ten ounces. It is then rinsed and transferred to a bath of sodium sulphite, two hundred grains; water, fifty ounces. After soaking in this for a minute, it is again rinsed, and the exposure made on the wet paper in the ordinary way on the enlarging easel. About twice normal exposure is necessary, but the resulting bromide print—which is developed and fixed as usual after the exposure—shows no trace of fog and the image is as clean and clear as on a perfectly fresh piece of paper.

OIL AND BROMOIL.

Last month I gave an extended exposition of the latest method of working bromoil. To this may be added a suggestion recently made in the "British Journal of Photography," that the addition of a small quantity of a ferrous salt materially facilitates the process of pigmenting. Quantities were not given, but I would suggest for experiment 2 grains of ferrous sulphate to each pint of water used in the manipulations.

BROMIDE PAPER FOR THE OIL PROCESS.

A French worker of the Rawlins oil process, Mr. P. Pommereuil, writes in the "Bulletin of the Société Havraise," recording his satisfaction in using, as the basis of the process, commercial bromide paper from which the silver salts have been removed by a bath of hypo. He excuses the adoption of this rather costly method on the ground of the immense variety of surface-texture obtainable among bromide and gaslight papers, and declares his preference for a pseudo-canvas paper, such as the Texo-Velox, the grain of which allows of very pleasing effects being obtained resembling those on canvas. Ordinary Velox and the Lumière B paper, after fixation, and, of course, washing, were also found excellently adapted for the oil process, exhibiting satisfactory resistance to the brush. For sensitising M. Pommereuil, like M. Demachy and other French workers, prefers a spirituous solution, one part of a six per cent solution of ammonium bichromate mixed with two parts of pure alcohol. This allows of the print being ready to print within ten to fifteen minutes of sensitising.—"British Journal of Photography."

THE LATEST COLOR-SCREEN PLATE.

An extremely ingenious methods of making a color-screen for a screen plate for direct color photography is described in connection with a patent just taken out by Späth, of Steglitz. A gelatine film is sensitised with bichromate and exposed under a black and white screen something like a chessboard, with numerous very small squares. It is then treated with a solution containing a blue and an orange dye, of such character that one is absorbed by the unexposed gelatine, the other is taken up by the exposed parts. The film is desensitised by washing, and then resensitised and exposed under a similar screen, but this time placed at an angle of forty-five degrees to the first position, washed, and treated with a solution of a yellow dye. The positions of the

squares in the exposure screen are so arranged that this time a certain part of the blue squares now become green through the action of the yellow dye on the exposed patches. Thus, a screen is prepared with orange, green, and blue patches, which can be used similarly to the various screens now employed for direct color photography. It remains to be seen whether the process will work out well in practice, but in theory it is certainly remarkably neat.—"Amateur Photography."

METOQUINONE.

For time exposures the following solution is used, the metoquinone being first dissolved, and then the anhydrous soda sulphite:

Water	1000 ccs.	20 ounces
Metoquinone	5 gms.	44 grains
Soda sulphite (anhyd.)	30 gms.	130 grains

For snapshots the above formula may be used, but it is better to prepare a somewhat more energetic developer by the addition of a small proportion of alkali, or of a substitute for an alkali, in accordance with one or other of the following formula:

No. 1.—

Water	1000 ccs.	20 ounces
Metoquinone	5 gms.	44 grains
Soda sulphite (anhyd.)	30 gms.	130 grains
Soda carbonate (anhydrous)	5 gms.	44 grains
Potassium bromide, ten per cent solution	10 ccs.	90 grains

No. 2.—

Water	1000 ccs.	20 ounces
Metoquinone	5 gms.	44 grains
Soda sulphite (anhyd.)	30 gms.	130 grains
Potassium bromide, ten per cent solution	10 ccs.	90 grains
Acetone	10 ccs.	90 grains

The two formulas give practically the same results. No. 1 is the least expensive, No. 2 is not quite so advantageous in this respect as No. 1, but it avoids the use of an alkaline carbonate, and is therefore particularly recommended for use in hot countries.

For under-exposed negatives one or other of the above formulas given for snap-shots is used, diluting one part of developer with two parts of a solution of carbonate of soda containing five grams per litre.

For over-exposed plates the single solution developer given for time exposures is employed, but with the addition of ten per cent. bromide solution to the amount of from two to twenty cubic centimeters per litre of developer (or twenty minims to three drams per twenty ounces). As a developer for lantern-plates, where a black tone is required, the first formula given above, namely, that for time exposures, may be used, or No. 1 and No. 2 of the formulas for snapshots. Of these No. 1 gives somewhat softer results than No. 2.

For stand development the following is a very suitable formula, due to M. F. Dillaye:

Water	4000 ccs.	40 ounces
Metoquinone	5 gms.	25 grains
Soda sulphite (anhyd.)	50 gms.	240 grains
Potassium bromide, ten per cent solution	5 ccs.	24 minims

The negatives should be turned over in this solution at the end of every quarter of an hour, and well washed between developing and fixing; the total time of development will be about an hour, and the fixing bath is preferably an acid one.

The following two formulas differ considerably. No. 1 is intended for bromide papers, whilst No. 2 is used for developing or gaslight papers.

No. 1.—

Water	1000 ccs.	20 ounces
Metoquinone	3 gms.	27 grains
Soda sulphite (anhyd.)	30 gms.	130 grains
Soda carbonate (anhydrous)	5 gms.	44 grains
Potassium bromide, ten per cent solution	10 ccs.	90 minims

No. 2.—

Water	1000 ccs.	20 ounces
Metoquinone	12 gms.	106 grains
Soda sulphite (anyhd)	40 gms.	360 grains
Soda carbonate (anhydrous)	20 gms.	180 grains
Potassium bromide solution, ten per cent	20 ccs.	3 drams

During hot weather it is a good plan to use acetone instead of carbonate of soda. In formula No. 1 the five grams of carbonate can be replaced by ten cubic centimeters of acetone, and in formula No. 2 the twenty grams of carbonate also by ten cubic centimeters of acetone.

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

A CONVENIENCE IN ENLARGING.

I was in the workroom of a professional, the other day, and saw a very handy arrangement on the enlarging camera. This, by the way, is a regular view camera joined up to the wall of the darkroom with a specially built back that receives the negative carrier. The light, an electric arc, is outside the room. To the top of the camera front, that part in which the front board is fastened, has been hinged a piece of thin wood, just wide enough to easily carry a circular yellow screen let into one end, and just long enough so that when turned down over the lens the circular screen comes right in front of the lens. A square piece of yellow or light ruby glass would do as well, but the circular screen was at hand, being replaced by a better color screen for use with the camera in the everyday work of making negatives. The hinges which fasten this flap to the top of the camera front work are just stiff enough so that, when an exposure is to be made, all the operator has to do is to lift it from in front of the lens and it stands in position, so that a downward flip of the hand causes it to fall into position over the lens and terminate the exposure. The light shining through it is, of course, so non-actinic that it has no effect upon the bromide paper, allowing the operator to pin it in position and see just what size the image is being made. It has all the advantages of a yellow cap, without the disadvantage of being misplaced or having to be held in the hand while making the exposure.

AN OUT-DOOR STUDIO.

There was a visitor from a northern city in to see me one day recently, and he had some very interesting prints to show me. Although they were simply experiments, they showed great possibilities in the idea. It seems that he has a gen erous porch at the back of his house, and, taking a leaf from the moving-picture people, he has fitted himself up with four or five screens that he can use to represent the walls of a room. Two of them are simply light frames covered with cloth and then again covered with some cheap wallpaper of a kind that photographs to his satisfaction. Another one carries a light window frame fitted with two sheets of celluloid; and these last he sometimes decorates with narrow strips of binding tape in imitation of leaded glass, diamond pattern, as a rule. Another is a good representation of a fireplace, needing only the further assistance of a fender and a pair of tongs, articles which he numbers among his accessories. The fifth is also built up of light wood, to carry, near the center, two cupboard doors that open into a shallow dry-goods box nailed against the other side, its interior provided with shelves. It takes but a few minutes for him to set his stage for almost any kind of a scene. One subject can be standing at the cupboard door, while another enters from either side; a subject seated at the fireplace becomes an easy matter. This last is always placed at the outer edge of the porch, so that the light comes up through the opening, lighting the subjects in characteristic firelight effects. The window scene is also always placed at the outer edge of the porch. The worker, of course, never tries to show more than one wall and a part of the other. Pictures are hung upon the wallpaper screens, and a shelf over the fireplace is used for old fashioned clocks, pewter mugs, and other utensils borrowed from the garret. I am looking for some interesting results if my visitor just keeps up his enthusiasm.

PHOTOGRAPHS ON SILK.

In introducing to its readers the subject of making photographic prints on silk, a French contemporary says that suitable silk is obtainable in Paris at the rate of about three shilling sixpence a yard for a width of twenty-three inches, but in this country the cost will be somewhat more. Much depends on the quality

of the silk. It should be plain and not unduly lustrous, the most suitable being "balloon silk." In a pint of water boil twelve grains of Iceland moss, and, after filtration of the liquid, add twenty-two grains of sodium chloride and two ounces of glacial acetic acid. This being poured in a dish, a piece of the silk is delicately floated on the liquid and allowed to remain for about two minutes, after which the piece is pinned up to dry. When dry the fabric is floated on the sensitising solution for a like time, and it is again pinned up to dry, but this time in the darkroom, the sensitising solution being compounded thus: Distilled water, ten ounces; silver nitrate, one ounce, and citric acid, forty grains; but it must be carefully filtered each time that it is used. The image is printed out, and allowance should be made for the slight diminution in intensity which results from toning and fixing, these operations being conducted as in the case of an ordinary printing-out paper. The image on the silk possesses a surprising delicacy and beauty.

DO NOT DEVELOP TOO FAR.

The average worker develops his negatives entirely too far. In fact, any plate demonstrator will tell you that a good proportion of the professionals do the same thing. It is the result of wanting to get pretty looking negatives. Either that or a desire to bring out all possible detail. Both are fallacies. Take a few of the best pictures and try and imagine the kind of negatives that are back of the prints. You can be quite sure they are not always pretty negatives. The same with the portraits that are acclaimed as the best at the conventions. And then this bringing out of more detail by prolonged development. About all that is brought out is halation, if there is any chance for it in the subject, and a tendency to build up density in the lighter parts of the negative and run high lights and near high lights all together. If there are any shadow details impressed upon the plate, you can be quite sure it comes up fairly early in development. It can't help doing so, because it is right on the surface of the emulsion. About all one can do by continuing development after the very highest of the high lights come through on the glass side of a plate, is to force a fogged effect into the shadows and spread the density of the high lights into the next steps of the scale. Even if you do not quite understand the matter, try the experiment of taking a few of your negatives out of the developer a little sooner than you otherwise would. Then, if you find they do not give you as good results as before, go back to your original way of working. You may be one of the few who really do not develop too far.

STAINING FRAMES WALNUT COLOR.

Another friend has turned out a lot of handsomely framed pictures for Christmas gifts this year. The pictures were, of course, small bromide enlargements from his own negatives. The glass was obtained in the form of waste negatives from the local photographer. The frames were made of an inexpensive white-wood molding, stained walnut color with the following:

Bichromate of potassium.....½ ounce
Vandyke brown .....5 ounces
Sodium carbonate .....2½ ounces
Water . . .. 2 quarts

Boil, and apply to the frames either warm or cold.

TO AVOID CRACKED GLASSWARE.

A valued correspondent, Carl A. Bergmann, sends the following excellent little tip. He says: On many occasions hot water has to be used in making up photographic solutions. In pouring it into a graduate, bottle, or other glass receptacle, either exceptional care must be used or a cracked article results. The danger can be avoided by the most simple means; simply wet the glass or bottle, inside and out, by immersing it in cold water, and immediately one can pour boiling water into it with impunity. This may be known to some of your readers; but, as I have never seen it in print, I send it along.

FERROTYPE DEVELOPER.

Take twenty ounces of water, add three hundred grains ferrous-sulphate, add an ounce of glacial acetic acid, ten minims of nitric acid, and lastly an ounce of alcohol. Increasing slightly the nitric and cutting down the acetic acid, the pictures will appear more metallic. This for a Kansas correspondent who is using a penny picture camera.

Associations and Clubs

WOMEN'S FEDERATION P. A. OF A.

In response to the generous recognition of our organization by the Executive Board, P. A. of A., we, as members and as individuals, wish to combine our efforts and heartily co-operate to make our Women's Federation thoroughly representative. We need you, and you need to become a member, either active or associate, of the P. A. of A. Because by combined effort you will accomplish more than by individual effort. Come and be one of us, and we will talk these matters over and see what can be done for the betterment of our chosen profession. You cannot afford to miss the help gained by coming in contact in a spirit of fellowship, with those of your own profession who are aiming at the same goal. It is an incentive to better and more careful work the year round. Be unselfish; it is ethical as well as educational.

Women's work will be hung in a separate class at Milwaukee this summer, and we want a good showing made. Only three prints are required of each member—not a great demand—and you will be well repaid for the time and effort needed to make them up. Will you not pledge yourself to do this by writing to the President of the Federation, Mary Carnell, 1312 Chestnut Street, Philadelphia? We must make early arrangement for space and cataloguing. Consider this and determine at once that you will exhibit. Do it now!

KATHERINE JAMIESON,
Chairman Middle Section.

THE WOMEN'S FEDERATION.

Philadelphia, April 21, 1910.

The Women Photographers of the United States will meet for the first time, as a body, and as an organization for women, with the National Association of Photographers at the Annual Convention in Milwaukee, July twelfth to sixteenth. We are distinct, yet fully affiliated with the national body.

The Board of the P. A. of A., alive to the growth of the federation in the past few months, has accorded full recognition, wall space, hours and support at this convention. It is the duty of each one of us to make such a show, both individually and as a united body, so that the purpose and sound business advantage of our affiliation shall be firmly established.

Will you join us and do your best towards making this exhibit by the women a brilliant and convincing success? Will you send specimens of your work? Just three prints, which will most thoroughly represent you! Photographs are to be unframed. The intention is to give each exhibitor equal representation and to secure a harmonious, uniform and impressive display. It is proposed to use glass to cover each exhibit. All prints will be carefully handled and hung to the best possible advantage by a committee selected from our own members. It is expected that this collection of photographs will attract great attention from the press of the entire country. Exhibitors are requested to note on entries any objection to pictures being reproduced for publication.

In order to facilitate the labors of the committee and the Women's Federation, please let me have your name on or before May twenty-fifth, so that it may be incorporated in the list of exhibitors and placed in our catalogue.

Cordially yours,
MARY CARNELL,
President.

PHOTOGRAPHERS' ASSOCIATION OF NEW ENGLAND.

A sterling silver loving cup, doubtless the most beautiful and intrinsically the most valuable prize ever offered by the Photographers' Association of New England, is open to the world for competition, without entrance fee, at their convention in Boston, July twenty-sixth, twenty-seventh and twenty-eighth.

Most attractive trophies will be up as usual for competition of members only; as an extra incentive to the various States included in the Association, a State Class has been created in which competition is limited to members from individual States.

Realizing the amount of labor and expense involved in preparing and forwarding

an exhibit, as a matter of courtesy the Association will show its appreciation by issuing to each exhibitor in the art department an "exhibitor's certificate," suitable for framing.

Full particulars regarding prizes and program are being sent direct to New England photographers and may be secured by others interested from George H. Hastings, Secretary, 37 Merrimack Street, Haverhill, Massachusetts.

Among the attractions already secured, we note Ryland Phillips, illustrated lecture, "With Other Photographers;" J. Hanmer Croughton, illustrated lecture on pictorial composition as applied to photographic portraiture, and C. H. Claudy, critical and analytical lecture on advertising. The program arrangement insures three full days; the outing or excursion will not occur till late afternoon of the third day.

NEBRASKA PHOTOGRAPHERS' ASSOCIATION.

The Executive Committee of the Nebraska Photographers' Association held its annual committee meeting in the Lincoln Hotel, Lincoln, Nebraska, February tenth, for the purpose of arranging for the Convention of 1910. All officers present. All of the Advisory Board present except A. C. Townsend.

The Art Hall at the State University was selected for next Convention, to be held September twenty-seventh to thirtieth, inclusive. With three national men to serve as judges, we assure you that, with their broad-minded and conservative knowledge of photography, you can rest assured of a fair rating to all. A new class was created which was named the "Special Class" and was given rank between the "Children's Class" and "Class A." First prize in this class will be a large bronze bust, one that would be a most attractive object for any photographer's reception room. Second prize, fine gold medal. Third prize, silver medal.

If you are a non-member you will do well to join our ranks. The Nebraska Photographers' Association stands for protection, the upbuilding of photography in an intelligent and financial manner. The Association is forming a great question box whereby questions that directly confront the photographer will be considered, weighed and given attention to the best of our ability.

If you are a photographer in good standing in your community and eligible, I will be only too glad to enroll you as a member. What higher credit can you do yourself than by becoming a member of the Nebraska Photographers' Association? By so doing you become a member of the Photographers' Association of America, the highest Photographers' Association in the United States.

RALPH R. ROSZELL,
Beatrice, Nebraska. Secretary N. P. A.

FORMER I. C. P. STUDENTS AT THE INTERMOUNTAIN CONVENTION.

Considerable honors were won by former Illinois College of Photography students at the convention of the Intermountain Photographers' Association of Utah, Nevada, Colorado, Idaho, Wyoming and Montana last month. Among the officers elected were former students J. C. Cooley, President; C. H. Gutter, Secretary and Treasurer; LeRoy Kellogg, Vice-President for Colorado, and C. D. Gallagher, Vice-President for Nevada. First Prize in Class A was won by LeRoy Kellogg, and First Prize in Class B by C. D. Gallagher.

NEW DETROIT CAMERA CLUB.

A camera club has been organized at Detroit, Michigan, to be known as the Detroit Camera Club. A number of camera enthusiasts recently met at the Detroit Museum of Art, and plans for an organization were made. A committee was chosen to draft a constitution and by-laws, and at a second meeting these were discussed, and the club was formally organized. The following officers were elected: W. B. Wilcox, President; C. L. Warren, Vice-President; Harold Collins, Treasurer, and C. J. Schauer, Secretary. The members engaged in an outing the following Sunday, and many pictures were snapped. A subject was chosen and it was taken by each member from the viewpoint that appealed to him as the best. The success of the club is assured by the great interest, spirit, and enthusiasm being displayed. Club rooms, with dark rooms and all of the necessary equipment, will be secured as soon as possible. Correspondence with other clubs is solicited. Address the Secretary, C. J. Schauer, 82 Harper Avenue, Detroit, Michigan.

International Photographic Association

NEW IOWA ALBUM DIRECTOR.

Dear Clute: Miss Carrie Page, Monticello, Iowa, Album Director, has resigned her position on account of sickness, and I have appointed C. E. Moore, Eddyville, Iowa, to fill the position. Mr. Moore will at once begin getting together pictures for an Iowa Album, in the meanwhile routing the "Special Trinidad Album" to the members. Iowa members should get in touch with Mr. Moore at once, if they wish to have some of their work in Iowa No. 1 Album.

J. H. WINCHELL,
Chief Album Director.

TO OUR CALIFORNIA MEMBERS.

Every member of the I. P. A. in California should have received a letter from the State Album Director requesting a generous collection of their best prints from which to make selections in making up the first California Album. Mr. Blumann has mailed such a request to every name listed, and a carefully bound and attractive album awaits the co-operation of the members. As a help in keeping prints segregated, it is suggested that each picture have the maker's name on the back; and, that they may arrive in presentable shape, each sender should pack them between corrugated cardboard with the corrugations of the upper sheet running in one direction and those of the lower, across; this precludes the possibility of bending or breaking in transit. Whether you care to receive the album or not, please send your prints and give what benefit and pleasure you can thereby to those who will see them.

Mr. Blumann promises the California members his best endeavor and such taste as in him lies to give them a collection so mounted and selected as to be worth their while to see; and, with generous co-operation, to make it worthy of our State, which is so rich in the material of which pictures are made and whose climate offers twelve months of photographic possibilities each year. Under any circumstances, kindly acknowledge receipt of his communication, and do not expect a stamp enclosed when such communications are of an official nature.

TO CIRCULATE ALASKA PICTURES.

P. S. Hunt has been appointed State Album Director for Alaska, to represent the International Photographic Association which collects and circulates albums of views amongst its members.

As State Director for Alaska, Mr. Hunt will receive pictures from Alaska members of the Association, arrange them in albums, and move them around the territory on fixed circuits in Alaska. After completing the Alaska circuits, these albums will be sent to the International Director to be routed on circuits in the States, and eventually around the civilized world.

Albums made up on outside circuits will be sent to Alaska from time to time, and it will be Mr. Hunt's function to route these over the Alaska circuits.

The work of the International Directory will advertise Alaska extensively free of charge, by displaying Alaska views, made by Alaska photographers, around the world.

The Association has been in existence several years, and has organized a large membership. Mr. Hunt has been repeatedly solicited to take the post of Director for Alaska, but he has heretofore declined because of the amount of work the position entails. He has finally decided to take a chance at it in hope of doing something for himself and Alaska by the work.—"Valdez Prospector."

ALBUM DIRECTORS.

Alabama—Richard Hines, Jr., 155 State St., Mobile.
Alaska—P. S. Hunt, Valdez.
California—Sigismund Blumann, 3159 Davis St., Fruitvale, Cal.
Colorado—O. E. Aultman, 106 E. Main St., Trinidad.
Connecticut—George E. Moulthrope, Bristol.
Florida—Capt. E. S. Coutant, U. S. Life-Saving Service, Oak Hill.
Illinois—Harry Gordon Wilson, 4950 Washington Ave., Chicago.
Indiana—H. E. Bishop, 1704 College Ave., Indianapolis.

Iowa—Miss Carrie Page, Monticello.
Kansas—H. E. High, R. F. D. No. 1, Wilson.
Kentucky—G. Harrison Truman, 3903 West Broadway St., Louisville.
Maryland—E. G. Hooper, 218 East 20th St., Baltimore.
Massachusetts—John Mardon, 161 Summer St., Boston.
Michigan—W. E. Ziegenfuss, M. D., 327 West Hancock Ave., Detroit.
Minnesota—Leonard A. Williams, St. Cloud.
Mississippi—Emory W. Ross, Institute Rural Station, Edwards.
Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.
Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.
Nebraska—Miss Lou P. Tillotson, 1305 South 32nd St., Omaha.
New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor St., Manchester.
New York—Louis R. Murray, 266 Ford St., Ogdensburg.
New Jersey—Burton H. Albee, 140 State St., Hackensack.
North Dakota—Jas. A. Van Kleeck, 619 Second Ave. North, Fargo.
Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.
Oregon—Leonard S. Hopfield, Box 622, McMinnville.
Pennsylvania—William C. Barbour, Sayre.
South Dakota—C. B. Bolles, L. B. 351, Aberdeen.
Texas—Frank Reeves, Graham.
Utah—John C. Swenson, A. B., Provo.
Wisconsin—H. Oliver Bodine, Racine.

NEW MEMBERS.

2413—John O. Jacobs, 438 Oneida Ave., Pierre, S. Dak.
Post card size, developing paper cards of Indian chiefs, 50 views of the Custer massacre (reproductions), and post card views from different places of interest, for post cards only. Class 1.

2414—M. G. Hughes, Creswell, Ore.
Class 3.

2415—William Lander, Midway, B. C., Canada.
3¼x5½, developing paper, of landscapes, mountain pictures, mining scenes, etc., for pictures of local scenes and of general interest. Class 1.

2416—Erick W. Bahr, care Downs Hotel, Vinton, Iowa.
4x5, post cards and smaller, developing and printing-out papers, of general scenery and landscape work; for post cards and 4x5 of general scenery. Class 1.

2417—F. M. Goyk, R. F. D. No. 3, Box 40, Auburn, Mich.
Class 2.

2418—Fred Doudna, Malta, Ohio.
5x7 up to 10x14, developing, bromide, and some Platinum, of home portraits and landscapes. Class 1.

2419—H. C. Boesche, Van Wert, Ohio.
Class 3.

2420—W. C. Brown, 730 Forest Ave., Evanston, Ill.
Lantern slides of U. S. cities and country, country life, Mexico, South America, India, Egypt, for lantern slides only of subjects of interest. Class 1.

2421—W. A. Morse, 20 Kemper Place, Chicago, Ill.
Lantern lides of Cuban subjects, embracing the entire island, for lantern slides only of pictorial and interesting subjects. Class 1.

2422—S. O. Barnum (The Barart Shop), Shinglehouse, Pa.
Class 2.

2423—Miss Mary James, Florence, Ark.
4x5 and 5x7, developing and printing-out papers, of home portraits, animals and views, for same. Class 1.

2424—William B. Codling, Northport, Long Island, N. Y.
4x5, various papers, of general subjects, for same. Class 1.

2425—M. F. Compton, 1,000 Juliana, Parkersburg, W. Va.
3¼x5½, developing papers and post cards of general views. Class 1.

2426—John J. Slater, R. F. D. No. 3, Box 43, Racine, Wis.
Class 2.

2427—Sigward C. Lund, Carrington, N. Dak.
Class 2.

2428—James P. Hutchings, 144 Linn St., Ithaca, N. Y.
Class 2.

2429—H. E. Fry, 1746 W. Pacific St., Philadelphia, Pa.
Class 2.

2430—Owen E. Meals, Box 28, Valdez, Alaska.
Class 2.

2431—Wm. G. McConnachie, R. F. D. No. 2, Medford, N. Dak.
Class 3.

2432—Leland C. DeGroodt, 10829 Hampden Ave., Cleveland, Ohio.
Class 2.

2433—Clifford Kirk, Queen St., Kincardine, Ont., Canada.
4x5, 3¼x4¼, 2¼x7 panoramic, and post cards of views, portraits, genre, marine, moonlight views, and birds for same. Good work for good work. Class 1.

2434—Wiley Davis, Numa, Iowa.
5x7, 4x5 and 3¼x4¼ on developing paper of outdoor views in general, river and woods for woods, river, and camping out views. Class 1.

2435—John H. Diehl, 168 N. Clinton St., Chicago, Ill.
4x5, developing paper, of scenic subjects, for local scenery and general subjects of interest. Class 1.

2436—G. M. Thompson, Apartado 13, El Oro, E. de Mexico, Mexico.
Class 2.

2437—F. T. Negley, Cedar Falls, Iowa.
Class 2.

2438—F. E. DeVan, R. F. D. No. 2, Rock Creek, Ohio.
Post cards of interesting outdoor scenes and views, for the same in post cards, only. Class 1.

2439—Perry A. Wilson, 227 Gates Ave., Elyria, Ohio.
Class 2.

2440—George Claus, 100 Grand Ave., E. Eau Claire, Wis.
Up to and including 11x14, on platinum and developing papers, specializing children's portraits, for children's portraits and portraits in general. Class 1.

2441—G. T. Stevens, Kayford, W. Va.
3¼x5½ and 3¼x4¼, developing paper, of bituminous coal field; for mining work, any branch. Class 1.

2442—C. Willard Evans, 187 Fremont St., San Francisco, Cal.
5x7, 3¼x4¼, and 2¼x3¼, developing paper, of anything that strikes my fancy, and portraits; for anything of interest. Class 1.

2443—Ensor H. Blanchard, 25 de Mayo, San Isidro, Buenos Aires, Argentine Republic.
3¼x4¼, developing paper, of views of houses, landscapes, rivers, and portraiture, for landscapes and photographs of people taken by amateurs; am only an amateur. Class 1.

2444—Edwin Jaggers, 314 N. Jefferson Ave., Paris, Ill.
Class 2.

2445—James E. Mead, 5934 S. Park Ave., Chicago, Ill.
3¼x4¼, developing paper, of landscapes and scenery, some interiors and portraits; for prints or post cards. Class 1.

2446—Chas. M. Schooley, R. F. D. No. 23, Brockton, N. Y.
Post cards to 8x10, developing papers, of views from the Adirondack Mountains, hunting, camping and fishing. Class 1.

2447—Oscar Ulstad, R. F. D. No. 2, Box No. 28, Madison, Minn.
Class 2.

2448—M. Crumb, Fort Worden, Port Townsend, Wash.
5x7, developing paper, of general outside view work, army life especially; for views or most any kind of subjects. Class 1.

2449—Harry L. Tanner, Florence, Ky.
Class 2.

2450—A. W. Lansche, Truxton, Mo.
5x7, Aristo-platino and developing paper of general scenery; for same. Class 1.

2451—C. H. Holcomb, Tonala, Chiapas, Mexico.
Class 3.

2452—George D. Perrottet, Rowe St., North Fitzroy, Melbourne, Australia.
4¼x3¼, self-toning paper, of landscape and figures; for similar subjects, trimmed but unmounted. Class 1 for sample exchange.

2453—John E. Wornson, Brookings, S. Dak.
Up to 11x14, developing paper; for cabinet size prints only. Class 1.

2454—Henry R. Gebhardt, 48 Wood St., Waterbury, Conn.
3¼x5½ to 5x7, mostly developing paper, of genre, landscape, portraits, etc.; for landscapes, marines, frontier scenes, or anything interesting. Class 1.

2455—Elliott S. Blakely, No. 86 Union St., Lynn, Mass.
5x7, developing paper of flower, wild and cultivated; for the same. Class 1, for sample exchange as above only.

2456—Mrs. C. W. Wheeler, Clinton, Minn.
4x5 on post cards, of cyclone and general views; for post cards only. Class 1.

2457—John Shahan, Marion Institute, Marion, Ala.
Class 2.

2458—Warren E. Dodge, Box 25, Hubbard, Iowa.
3¼x5½, developing paper, of scenery, local views and photo post cards; for views and scenery in post cards only. Class 1.

2459—W. H. Schmidt, Box 241, Turlock, Cal.
5x7 and smaller, developing paper, of home portraiture, farm views, river scenery, landscapes, etc.; for landscapes, farm views, home portraiture, or anything artistic. Class 1.

2460—Frieda Soderlind, Box 157, Fergus Falls, Minn.
4x5, developing paper, of landscapes, interiors with subjects in groups, etc.; for anything in the portrait line. Class 1.

2461—Margaret Seaman, R. F. D. No. 2, Box 41, Utica, Neb.
Class 2.

2462—N. A. Howard Moore, 159 Rubridge St., Peterborough, Ont., Canada.
5x7, various papers, of landscapes, interiors, public buildings, statuary from life, and animals; for Anglican churches, landscapes, genre, and marine views. Must be good. Class 1.

2463—Harry Parks, 20 Aylmer St., Peterborough, Ont., Canada.
3¼x4¼, developing paper, of landscapes; for same. Class 1.

2464—Mark A. Getty, Box 356, Lakeview, Ore.
5x7 and smaller, on developing paper, of mostly studio work, some views; for any kind of pictures that are pretty or instructive. Class 1 for sample exchange only.

2465—Richard Joel Russell, Box 194, Hayward, Cal.
3½x3½ and 3¼x5½, mostly developing paper, of farm scenes and animals; for foreign scenes and points of general interest. Class 1.

2466X—W. F. Haver, North Fork, Madera Co., Cal.
General landscapes and groups, on printing-out and developing papers.

2467—Peter Nick, Los Banos, Cal.
All sizes and stereo, on developing paper. All kinds of subjects. Desires to exchange good stereoscopic work only. Is a traveling professional, and change of address may delay exchange, so send only small number of stereo prints at a time. Class 1.

RENEWALS.

188X—Edward Truman, Burton, Ohio.
Address was Kyle, S. D. Changes from Class 1 to Class 2.

1390—Mlle. de Beaufort, Doorn, Holland.
Class 2.

1733—A. C. Ames, Peninsula, Ohio.
Desires to exchange stereo pictures only. No portraits or pictures of purely personal interest. Is in Class 1 for a sample exchange as above only.

1479—Tommy Brull, Hays City, Kans.
Class 3.

1807—C. J. Christenson, Thor, Iowa.
Post cards, developing paper, of lake, river, boat scenes, animals, landscapes, street scenes, etc.; for same class of work, including mountains, snow, etc. Do not want portraits. Will send out good work for good work, three or four prints at a time if desired. Class 1.

1875X—J. B. Shelton, Box 476, Jamestown, N. Dak.
5x7, all kinds of paper, of landscapes, still life and animal studies; for post cards of general interest, if good. Class 1.

1878X—Miles J. Breuer, University Station, Austin, Texas.
4x5, various papers, of landscapes, genre and studies; for similar pictures; does not care for general views. Class 1.

1887—Lewis A. Green, Middletown, Iowa.
4x5, various papers, of landscapes and anything of interest; for post cards. Class 1.

1896X—Roy J. Sawyer, 1564 Greenup St., Covington, Ky.
Post cards, of typical landscapes, flower studies, Niagara Falls, etc., of the best workmanship; for post cards only. Only cards sent under cover desired. In Class 1 with good members.

1905—F. A. Northrup, Greensburg, Kan.
5x7 and post cards, developing paper, of landscapes and objects of general interest; for the same. Class 1.

1914—H. H. Chapin, 4619 Western Ave., Los Angeles, Cal.
Class 2.

1957—John F. Goering, R. F. D. No. 1, Ames, Kan.
3¼x5½, developing paper, of anything interesting in prints and post cards; for the same. Class 1.

2042X—Mrs. F. D. Hathorne, Cushing, Maine.
Post cards only. Class 1.

2057X—James Dunlop, R. F. D. No. 31, Placerville, Cal.
Post cards only. Class 1.

2072—William H. Seward, Windsor, N. Y.
Post cards only. Class 1.

2185X—Gabriel P. Flores, Ph. D., College of Physicians and Surgeons, San Francisco, Cal.
Art portraits, flower studies, marine views, and focal plane work, for snow scenes and animal pictures especially. Class 1 for post cards only.

2381—Royal M. La Flower, Box 297, Port Angeles, Wash.
2¼x3¼ to 6½x8½, of landscapes, timber scenes, water falls, mountain scenery, ocean going boats, city views and postals; for views from all parts of the world. Class 1.

2203X—W. D. Leonard, Hartford City, Ind.

2255X—Fred E. Crum, Monsey, N. Y.

2274X—Elmer J. Towne, South Dayton, N. Y.

2282X—Jeppe Jepson, Box 2, Point Terrace, N. Y.

2352X—K. L. Stegner, R. F. D. No. 1, Payette, Idaho.

CHANGES OF ADDRESS.

1213—A. B. Davis, 128 Washington St., Sandusky, Ohio.
(Was 137 Sycamore St.)

2047X—G. L. Waterbury, Burnside, Ky.
(Was Pine Knot, Ky.)

2129—M. H. Morris, Route 1, Embarrass, Wis.
(Was X64, Leeman, Wis.)

2215X—S. S. Webb, 236 S. Main St., Warren, Ohio.
(Was 410 Thorn St.)

2298—Erwin E. Schroder, Bettendorf, Iowa.
(Was Davenport, Iowa.)

WITHDRAWALS.

1880—Edward O. Knight, 83 Union St., Athol, Mass.
Withdraws on account of lack of time.

1900X—Miss Frances Clark, Charlotte, Vt.
All cards due will be answered.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

THE SAN FRANCISCO CONVENTION LEAGUE.

The San Francisco Convention League was brought into being about a year ago. The first meetings, and the subsequent Board of Directors and Advisory Board, were made up of some of the best-known men in this city. These men were the selected representatievs of the various leading commercial organizations of San Francisco. Kirk Harris is President and Felton Taylor, Executive Secretary, with offices at 711-713 Merchants' Exchange Building.

Negotiations are in progress looking to favorable action for San Francisco in 1911 by a number of large assemblages. Two of these, the National Educational Association and the National Grocers' Association, are almost certain to come. We are in receipt of assurances of support, which makes it more than probable that San Francisco will be the 1911 meeting place of these great bodies. These two alone will mean fifty thousand visitors.

Every convention meeting in the United States this summer will be attended by delegations from this city, backed by the influence and money of the league to make a campaign for San Francisco, and San Francisco will once more be the "Convention City."

AN INTERESTING AND INSTRUCTIVE ENTOMOLOGICAL REPORT.

The Second Annual Report of the State Entomologist of Indiana has just come to hand. Benjamin W. Douglass, the State Entomologist, is an old contributor to this magazine and an amateur photographer of no mean attainments, as this well-illustrated volume plainly shows. The book has some two hundred and fifty pages, and one would imagine nearly as many illustrations. Plant and tree pests are treated exhaustively, and a section is devoted to bee diseases and kindred troubles of the apiculturist. The book is a mine of valuable information, embodying as it does the result of a vast amount of careful investigation and inspection by Mr. Douglass and his assistants. While the volume is hardly intended for general distribution, particularly outside the State, a courteous request explaining that the writer is interested in the subject in more than a superficial way, and addressed to Mr. Douglass, will no doubt bring a copy. We must congratulate the Hoosier State on having so capable a worker in this important branch of its governmental activity, and believe that Mr. Douglass has set a high standard for those in charge of the entomological departments of other States to reach.

"WILLOUGHBY SPECIAL NO. 120."

This is a list, sixteen pages and cover, of surprising bargains in lenses, cameras, and, in fact, everything photographic, issued by C. G. Willoughby, 814 Broadway, New York. Mr. Willoughby has long enjoyed an enviable reputation for square dealing, and our readers will do well to send for a copy of this new bargain list. A post card will bring one, and the bargains offered will be found most tempting.

ONE THAT IS RIGHT.

The average photographic department in the lay press is a joke, particularly when the "editor" of the department tries to turn out some original matter or answer a few questions on his own responsibility. Even in the matter of making selection of clippings from photographic magazines there are great opportunities for blundering. But there is a department in the "American Boy" that is edited by Dr. Hugo Erichsen, under the title, "The Boy Photographer," that is apparently, quite apparently, the work of a man who himself knows something about photography and knows what the average readers of such a department want to know. A well handled monthly competition adds to the interest of the photographic readers of the magazine; and,

considering the small space available, the amount of good, interesting material that the doctor manages to crowd into his department each month is surprising.

A CATALOG OF THE HALL MIRROR CAMERAS.

The new catalogue of the Hall Mirror Cameras is just to hand. The camera is fully described, both by pictures and text, directions for use and full specifications, with prices given. The neat little Hall Diamond, the latest production, is included. It makes a picture 2½x4¼, has the same reflecting features as the others, and, fitted with lens, costs only nineteen dollars and a half. Description and prices of the Hall Portable Darkroom are also given. But the large number of reproductions of good speed photographs make the booklet one that will more than please any worker interested in high-speed work. Do not neglect to send for a copy; it's free. Address, The Hall Camera Company, 14-18 Dunham Place, Brooklyn, New York.

AN INTERESTING CATALOG.

The handsome, new catalog of the Photo Crafts Shop has reached our desk, coming just too late for the April issue. It is a booklet that will interest every amateur, many of the articles enumerated being listed, we might say, made available, for the first time. Gum-bichromate and kallitype material, down to the smallest detail, is supplied by this enterprising firm. Bodine's monochrome, and Bodine's pictorial lenses are listed; lenses that, although quite inexpensive, have been tested by, and met with the hearty endorsement of, some of the leading pictorial workers in this country. The firm does an extensive business in amateur developing, printing, enlarging and coloring, and these items are scheduled, together with prices, in an interesting manner. Send for one of these catalogs at once. Address, Photo Crafts Shop, Department B, Racine, Wisconsin.

WOLLENSAK PRODUCTS.

Intended purchasers of lenses and shutters should not overlook the Wollensak line. Their new Optimo shutter is a most excellent one, having features that recommend it to camera users in no mild manner. To mention only one of their excellent lenses, the Velostigmat has the endorsement of many of the best workers as an all around lens of exceptionally fine quality. The combination, an Optimo shutter and a Velostigmat lens, should gladden the heart of any enthusiast who is desirous of producing the best photographic work. Write the firm for their catalog and also a booklet called "The Photographic Quartet." Both are free, and will give you a lot of information. The name and address: Wollensak Optical Company, 288 Central Avenue, Rochester, New York.

THE ANTINOUS SHUTTER RELEASE.

This utility bids fair to supersede all other shutter releases. Being of metal, always ready, always sure, the Watson Antinous Shutter Release becomes an actual necessity. George Murphy, Incorporated, 59 East Ninth Street, New York, are American agents.

A NEW DEVELOPING TANK.

We would call the attention of our readers to the new advertisement of the Multi-Speed Shutter Company in this issue. The new tank there pictured should interest. With this tank they are introducing a feature in development that is practically new in this country. Horizontal development has been thoroughly tested in Germany, and adjudged by its users superior to the upright method. You can demonstrate its merits for yourself with the ordinary trays and without expense. Try it, and then examine the new tank at your dealers. Its mechanical features are unique, having a very simple rack, opening like a book, and a light screen in the cover through which development can be watched, allowing individual treatment of the negatives. If your dealer does not have them, write the Multi-Speed Shutter Company, 161-163 West Twenty-fourth Street, New York.

THE KEYSTONE SCHOOL.

A recent letter from the genial Mr. South, principal of the Keystone School of Photography, advises that: "If all the ladies who have promised to do so attend the Keystone this coming season, it will look like a young ladies' seminary." This is rather risky, giving out information like that, unless a large number of gentlemen pupils can be accommodated—a fact which Mr. South evidently overlooked in his desire to give Mrs. South full credit for her success in making the lady students feel perfectly at home and among friends.

Downingtown is a pleasant summer resort among the hills, surrounded by beautiful scenery, and the roads are excellent. In addition to being a photographic expert, Mr. South has had the benefit of a sound art training, and to these are added an ability to make clear and simple those things which seem most perplexing to the seeker after photographic knowledge. All branches of photography are taught, and, most particularly, color photography on paper. All the pupils, Mr. South writes, seem to find this last quite easy, all saying it is easier than turning out a batch of prints on printing-out paper. Look up the advertisement and send for one of the new catalogues; they are most interesting.

WESTERN INVENTION.

We may turn to the East for originality in drama, fashions, or large financial enterprise; but it has remained for the facile adaptability of our own Western capability to meet the demand for photographic post cards at a reasonable price. Heretofore the genuine photographic post card has not been a selling success in competition with the popular one-cent half-tone or lithographed card. This has been due partly to the fact that a large batch of photographic postals, made by hand, at a very close price, were turned out in a careless fashion, some with margins cut off, the picture stained, no dependable regularity of tone or color, and always curled and twisted out of shape; having a poor appearance generally, and making a neat rack display impossible. Even though the quality happened to be passably good, the cost of production made the selling price prohibitive.

These difficulties are now all overcome and a new field is opened up for the photographer, post card jobber and retailer. By the perfection of the machine briefly described in our last issue its capacity becomes about three thousand cards an hour. Imagine, if you can, three thousand post cards printed, developed, fixed, and discharged into automatic washing tanks, in an hour's time. Ordinarily this would represent about three days' time for a fast printer and assistant. We have been favored with a few specimens of the cards produced and can give them nothing but the highest praise. We note with surprise how perfectly flat and even the cards remain after having been exposed in open display racks for weeks. This addition to the appearance of the card is made possible only after careful study and experiment in the "after treatment" and "drying," the cards being finally baked at a high temperature insures their remaining permanently flat.

Withal, the sole object of this new device is to meet a long-felt want and supply genuine photographic cards, and cards of good quality, at a price that is positively cheaper than the actual cost of production by the old-style hand process. If you have not already done so, drop a line to The Photo Craft Shop, 849-851 Ellis Street, San Francisco, California, on your business stationery, and they will mail you, for two cents in stamps to cover postage, samples of the work and complete prices.

THE NEW SENECA CATALOG.

The new Seneca catalog has just reached our desk; and, like its predecessors, it is not only a handsome sample of printing, with its beautiful cover lithographed in colors, but its text is most interesting, containing as it does many new ideas in camera construction. Despite the many improvements, the list prices of the cameras remain practically the same. The reinforced front of the pocket models, the jarless back of the new Seneca View, the sliding front on Competitor, and the interchangeable reversible backs for all the view models, are a part of the improvements. The penny picture outfit, the home portrait stand, the new 4¼x6½ size, the Filmett and Box Film cameras are some of the new things. The firm will gladly send a copy to any reader of "Camera Craft" who sends in a request. Do not overlook the matter. Address, Seneca Camera Manufacturing Company, Dept. H, Rochester, New York.

A NEW ROSS CATALOGUE.

There is a new catalogue of the Homocentric and other Ross lenses, and it is a worthy addition to every worker's file of interesting catalogues worthy of being kept and studied. The illustrations are very handsome and interesting, the text instructive to a degree, and the goods advertised worthy of every confidence. Write at once for a copy to the agents for the United States, George Murphy, Incorporated, 59 East Ninth Street, New York City.

Vol. XVII No. 6 JUNE, 1910 Price, 10 C

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CLASS A, I. M. P. A.
THIRD ANNUAL CONVENTION
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Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, JUNE, 1910. No. 6

What a Photographer Can Do

By P. Nick

THE AUTHOR, ON LEAVING GERMANY.

THE editor of "Camera Craft" wants me to write an article; one telling of my experience with a portable studio. I might, perhaps, make an interesting story out of the subject were the magazine printed in German, but to write in English makes the value of the results rather problematical, as I have only been in this country three years. However, this Editor will not take no for an answer; write it in German, write it in Chinese if I wish; he will put it into readable shape; that is what editors are for. And who can deny anything to the editor of "Camera Craft"? All the studio men have it lying around when I visit them and the amateurs who visit me ask if I saw such-and-such an article in the last issue, or the one before.

When I reached San Francisco, from Alaska, two years ago, I was somewhat broken in health, and entirely so in purse, so I went into partnership with Mr. Friedlander, a well known photographer in the street view business. At the start I did not think much of the business, but in a few weeks I learned that it paid well if one worked

conscientiously, turned out good pictures, and treated his customers right. In a little over six months I had saved over eight hundred dollars as my share of the proceeds.

When the Spring came, we wanted to go to the country; we, meaning my wife, the three children and myself. The real estate advertisements in the Sunday papers caught our eyes. Here was just the thing: "Five and ten acres of land; twenty-five dollars cash and ten dollars a month. The best land in the world. Make $10,000.00 a year." Ach Himmel! That looks fine. We saw the agent. "Now hurry up; pay $100.00 cash, and to the country. Have your own cows, hogs, chickens, fruit, berries, vegetables, everything." That real estate agent could paint a picture without a brush and paints, even without a camera; all he needed was words.

When we reached the location we were delighted. The weather was fine, ideal for camping. I got lumber and built a house, a stable, and chicken and pigeon shelters. We set out all kinds of berries, planted potatoes, tomatoes and other vegetables; kept a horse, cows, chickens, and pigeons.

"A HOUSE, A STABLE, AND CHICKEN AND PIGEON SHELTERS."

But the cows were the only productive things on the ranch. We had to buy feed for the horse. We bought feed for the cows and the chickens and got some milk and no eggs in return. Of strawberries or tomatoes, beans or potatoes, we had none, except as we bought them from others. We worked from sunrise until dark without any return for our labor or expenditure except that we had a little milk and the satisfaction of being always busy. Then I started out with my camera so that we might have bread and butter, if not fruit and vegetables.

When Fall came we had decided to let the ranch go and follow the photographic business as being much more profitable. The fifteen hundred dollars that would have made the ranch our own was not all paid; we had put in about twelve hundred; but we gladly sold out for one hundred. Forty-five of this went to the lumber yard at Livermore, leaving me with fifty-five dollars in cash. I have gone into this part of my experience in order to warn others, be they photographers or not, against these real estate sharks who advertise such tempting opportunities to make money on small ranches. There are no doubt many reliable firms that can sell you land that will really respond handsomely to intelligent application of hard work, but visit

the location and investigate before you buy. I found that even had I completed my payments, I could not have obtained a clear title to the land.

Selling the ranch and paying the lumber bill at Livermore, I went to Tracy and built a wagon or van. The running gear is what is known as a "Farmer's Handy Wagon;" practically all iron with steel wheels and flat, four-inch tires. The front wheels are twenty-eight and the rear ones thirty-six inches in diameter, with axles two and one-fourth inches in diameter. These cost from forty to sixty dollars, according to quality and whether

"WE NEVER HAVE ANY TROUBLE ON THE ROAD."

equipped with a brake or not. Get the best and have it equipped with a good reliable brake to avoid danger on hills. On the bolsters I placed a piece of timber so that when the floor beams were put on, the floor joists would clear the wheels for turning. The gear was coupled out to twelve feet and then two pieces of 3x8, eighteen feet long, were laid on the bolsters, one on each side, and firmly fastened to the front bolster and the rear axle with long hock-shaped bolts, two to each beam, to avoid any danger of the car tipping over. Sixteen feet was allowed for the body of the van and two feet for the porch on the rear end. Were I to build another I would couple out the gear to thirteen feet reach and allow two feet more on the porch by using twenty-foot floor beams. On and across these two timbers were securely bolted ten pieces of 2x4, nine feet long, and on these the floor was laid. The studding for the walls was 2x4 at the corners, with five 2x3 studs on each side and two at each end, all seven feet long. Across the top, from stud to stud, were placed seven pieces of inch plank standing on edge, six inches wide in the center and rounding down to three inches at the ends where they rest on the studs. These were boarded over with quarter inch pine and then covered with four-ply roofing paper, painted black. The door at the end is a regular house door, the two windows on each side and small one in the end, stock sashes. The sides were boarded up with redwood lumber, all else being pine. Bolts and screws were used wherever possible in order to secure strength and durability. The dark-room has a ceiling of its own to insure its being light-tight. The interior of the car is painted sky blue, the exterior silver gray with green trimmings.

The running gear cost me sixty dollars, lumber and bolts about seventy-five; stove, twenty; painting, fifteen; a good carpenter's helper for ten days, thirty dollars; making the total cost of the van about an even two hundred dollars. Although I am not a carpenter, I did the most of the work myself. It requires two to do the work to advantage; and one will find that the steel square and level are the most useful tools. As one enters the door from the rear, as shown in the picture, "An Afternoon Rest," the dark-room is to the right; it is a room four feet square with a ruby window to the outside. It contains a bench for developing and printing; shelves for stock; low shelves for fixing boxes, and the floor covered with some of the roofing paper so that it is always dry. To the left is the kitchen containing the stove, a nice, four-hole one with baking attachment, fastened securely to the floor so that it cannot move about as the car is being moved. At the other, or front end, there are three beds or bunks on one side, a double one below and two smaller ones for the children above. A nice curtain covers these so that they cannot be seen by people looking in. Opposite, in the other corner, are our three trunks and a closet in which to hang clothing. The center of the car is lighted by two windows, one on each side, each four feet wide. These are always clean and neatly curtained. A large oil lamp hangs from the ceiling, directly over the table in the center for light at night. This center space is really quite roomy, with a table and chairs not at all crowded. I use the table a great deal for mounting and such work. Between the window on the left and the stove on the same side is a closet for dishes and kitchen utensils. On both sides of the car, underneath, is a box, six feet long. One is used as a cellar and the other for tools and such like articles. The front has a strong double seat bolted on for the use of the driver when the van is being moved. Above it is a long, narrow window which gives light and ventilation. Both this window and the door at the other end are fitted with mosquito bar screens and with them both open at night there is the best of ventilation.

AN AFTERNOON REST.

When I wish to seek a new location I have only to hitch up and go. Four or six horses haul the wagon nicely and we never have any trouble on the road. I paid twenty-five dollars to have it hauled fifty miles, occupying two days and a half. The last haul of twenty-one miles cost seventeen dollars. The family follow along in a nice buggy, and we move only in good, "sunshiny" weather. About a half hour before we reach a town

"BY THAT TIME EVERYTHING IS IN READINESS."

I take the buggy, go ahead, and select a location. When the big wagon comes along all the people are on the street, asking: "What is that? Who is this?" They find it is a photographer and they say, "Oh, now we will all have our pictures taken," and before we get the wagon where we want it, some of them are there, asking how much we charge for taking pictures. By the next morning everybody knows that the picture man is in town. And I must not forget to mention the importance of always keeping a good stock of plates, mounts, and other supplies on hand. Such things are hard to get in a small town and the prices are often quite high for goods of doubtful age. Other traveling photographers passing through the town always come and ask me for plates and other supplies of which they have run short. I purchase all my supplies of Newberry's in San Francisco and never have the least trouble on that score.

By this time everything is in readiness. The interior of the wagon is easily put in order as everything has its place. The studio tent is 12x16½,

A TRAVELING SIGN PAINTER EXERCISES HIS SKILL.

the two pictures herewith showing it so clearly that no further description is needed. In it are placed four backgrounds, a chair or two, and such other accessories as are needed for making all kinds of pictures. Inside I hang up nice samples of pictures and postal cards, and it is not long before the tent is full of people looking at the work. Another little hip-roof tent is used to store harness, feed, hay, tools, and such things, so that there will be nothing under the wagon or around it or the tent, preventing the surroundings from looking clean and tidy. If the location is not just the right one, we move to another, the cost being rarely more than a dollar.

But before we start to work, we must find out if it is a corporation town, and if so, pay for a license. I go to the town marshal and find that a license for a resident photographer is three or five dollars; a traveling photographer has to pay ten or more. I explain that I have my own house, that its being on wheels does not matter, and that I pay rent for the lot where the house stands. When we have discussed the matter about long enough and his decision is not quite made in favor of the lower license, I offer to come over and take some good pictures of his house and family. That settles the matter, I pay three dollars for the license, go back and get my camera and go to work. I climb up windmill towers and to roofs of houses and take all kinds of views of the town, postal card size. Next I put twenty or twenty-four of the best in an album and go from store to store and take orders for them. I generally place about two thousand in this way, charging three dollars and a half a hundred for them. At the same time I am running my advertisement in the town paper. The postal cards help to keep me busy during the first few days which are always dull;

"I CLIMB TO ROOFS OF HOUSES AND TAKE VIEWS."

SOME EVERYDAY WORK. The small picture shows the author working from a rude, temporary platform in making farm views like the one immediately below it.

nobody seems to care about being the first to favor us with a sitting. But this soon changes and for three or four weeks we have all we can do with the town people. I use an ordinary 5x7 view camera, charging four dollars a dozen for that sized views and groups and four and five dollars a dozen for nice cabinet portraits. Post cards I make for one dollar a dozen. All the pictures are made on developing paper, studio grade. Developing and printing for the amateurs of the towns I visit bring in additional income. I treat them kindly and help them over their difficulties all I can. In a short time I have some films to develop every day. I charge fifty cents for developing and making one print from each on a six-exposure roll, up to 4x5 size. Extra prints, five cents each; larger sizes more in proportion. I do the work as carefully as I know how and they often send work to me from the last town I was in.

When the rush is over with the town people I hitch up the buggy every nice morning and go out in the country. These people are the best cus-

"I TAKE ALL KINDS OF VIEWS OF THE TOWN."

tomers if the work is good. Not a single order last week was less than ten dollars and one was for over sixty dollars worth of pictures. Of course, I find one location better than another, but the average is always quite satisfactory. In Germany I was in the mercantile line, following photography only as an amateur for my own amusement, and had never used developing paper until I came to America three years ago, and until that time I could not speak a word of English. I tried many lines of business as a source of income, but the best money making one is this traveling photographic business. I have put fifty dollars in the bank every week since I started, and I do not think there are many owners of studios in the cities who are doing as well. The life is pleasant and healthful, and we enjoy it thoroughly. The work is not hard, the hours are not long, and we are about as happy a family as one could hope to find.

IN APRIL. By BENJ. W. DOUGLASS

The Simplicity of Carbon Printing

By Paul Oesting

CHRYSANTHEMUMS.
By PAUL OESTING.

BEYOND doubt, the carbon process would be the most popular of the many printing methods to-day, were it not for the bugbear of sensitizing by immersion in the bichromate bath, drying over night, and then using the next day. The beauty, the permanency, the pliability of the process have never been questioned. In the first two qualifications it stands at the head. Gum-bichromate is perhaps more plastic, but it is but a modification of the carbon process. With the usual method of working carbon, the tissue is immersed in the sensitizing solution for a certain length of time, care being necessary that the absorption be even throughout; then it must be placed aside to dry for several hours in the dark and where the atmosphere is pure and free from dust. Finally, the printing has to be done within a few days or before the sensitized tissue becomes stale and useless. This last is no small drawback. If the weather following the sensitizing of the tissue makes printing out of the question, or should other matters claim the worker's attention, the amount sensitized becomes an entire loss. These objectionable features removed, the carbon process must surely become popular if only for the reason that the worker has at all times the choice of a variety of shades and colors, and practically an unlimited choice as to support, even wood, glass, leather and metal being suitable.

For some time I have been trying to solve the problem of an expeditious method of printing tri-chromatic carbon, a quick method of sensitizing and drying ready for printing being necessary when making three prints from three negatives and then superimposing them in exact register upon one support. With the old method of over-night drying, satisfactory results are almost impossible. From time to time there have appeared in "Camera Craft" formulas for sensitizing solutions permitting of rapid application and subsequent rapid drying of the tissue. Experimenting with these, I have found two which answer admirably; and, the sensitizing being mainly on the surface, quickly dried, and at once printed, the results are much more

satisfactory and more easily obtained than by the old method. As I have seen no report from others covering their experiences with these rapid sensitizers, I am turning my own unpractised pen to the work in the hope that others may be benefited by my experiments.

One sensitizing formula reads as follows:

Potassium bichromate	1 ounce
Water (hot)	8 ounces

When cold, add:

Ammonia (.880)	½ ounce

Mix thoroughly, then add:

Sulphuric ether	1 ounce
Alcohol or Columbian spirits	8 ounces

Tissue sensitized with the above formula dries in about ten minutes. Another good formula, but one which demands about twenty minutes for the drying of the tissue, is as follows: Prepare a saturated solution of bichromate of potassium in boiling water. When it cools, decant off the clear portion and, to every ounce of solution so obtained, add one and one-half ounces of liquid acetone. Care must be used in applying these sensitizers so that there is a uniform and even application over the entire surface of the sheet. Failures, due to a neglect of this important feature, have no doubt led many who have tried the method to return to the old immersion and over-night drying plan.

The sheet of tissue to be sensitized is placed, face upward, on a board, and held in place by an ordinary thumbtack at each corner. Approximately, the necessary amount of the sensitizing solution to coat the tissue on hand is filtered and placed in a glass or porcelain tray or dish near by. A two inch, rubber bound, camel's hair brush is dipped into this, and enough solution taken up to coat the surface of the sheet of tissue. The application with the brush is continued, first from side to side, and then from top to bottom, until there is an inclination on the part of the tissue to become sticky and hold the brush slightly. Here the worker must be quick and, as soon as this tendency is noticed, take a camel's hair blender or spreader, such as is used in gum-bichromate work, and, using it perfectly dry and free from dust, brush vigorously in both directions so that the tissue will dry evenly and free from brush marks. I have never found this method to fail in giving a perfectly even and uniform sensitizing. The brush recommended by the autotype people for the application of their spirit sensitizer is made by wrapping a strip of flannel around a piece of glass of a suitable size. In my hands it has proved quite unsatisfactory on account of its inclination to leave brush marks that invariably show in the finished prints. After the application of the sensitizer as advised above, the tissue is set aside to dry. The formula containing ether will result in a dry sheet of tissue in ten minutes; the other will require from fifteen to twenty minutes.

When dry, the tissue is placed in a printing frame behind a negative having a masked safe edge as usual, and placed to print for the determined time. The printing time I find by testing the negative by printing a strip of Solio paper to the right depth under the same negative immediately

before. Not the right depth for toning, but just right for a good proof. If the light is changeable, I select another negative that requires the same printing time, and use that as a pilot. When the negative with the tissue behind is put out to print, the pilot negative is put out at the same time and in the same light, with a piece of Solio paper behind it. When the Solio print is right I know that the carbon tissue is the same. I would add that all my negatives are proofed up on Velox paper a certain distance from a certain light, and the number of seconds required for exposure marked on the envelope in pencil. It is then easy to find a "pilot" for any other negative that I may wish to print in carbon, as I only have to look for one having the same Velox time penciled on the envelope.

The tissue printed, it is removed from the frame and placed face downward, in a dish somewhat larger containing cool water and the temporary support at the bottom. Turn the sheet of tissue a few times until all bubbles cease to appear and the sheet starts to straighten out and lie flat. Lift it out, still face downward, along with the sheet of temporary support, and allow the water to drain off. Place on some blotters, the back of the tissue upward, and rub gently, just enough to expel the water confined between the under side of the tissue and the upper side of the support. Do not squeegee, as is generally advised; but, if you do, do it very gently. Adhesion is not secured by pressure, as many seem to imagine, but is due to capillary attraction causing suction. Do not rub until the tissue has become dry. Allow the tissue to remain in contact with the support, under slight pressure for about fifteen minutes, plunge them into a tank or large tray of water at a temperature of from ninety to one hundred degrees Fahrenheit, and wait until the pigmented gelatine of the tissue starts to melt and ooze out from between the edges; then pull the paper backing of the tissue away from the support. It is in being in too great haste at this point that a mistake is easily made and the tissue torn. Allow development to proceed without assistance and by merely soaking in the warm water, adding a little warm water from time to time to keep the temperature up to about one hundred. If the exposure has been correct, the print will develop completely without the splashing on of water, the application of hot water, or other assistance than simply allowing it to rest in the water, and lifting it up to drain from time to time. When development is completed, rinse in cold water, and then give an alum bath as advised in the directions, if the print is a single transfer one, and then hang up to dry.

Working in this way I can easily produce a good carbon print in forty-five minutes And this does not mean that only one print can be made in that time. The number depends only upon the number of printing frames one can keep working. What is meant is that I can produce a carbon print, all finished except the final drying, in forty-five minutes from the time I start to sensitize the tissue. And, as I have previously said, I believe the prints so made are superior and more uniform in quality than I could produce with the same skill by the old method of sensitizing the night before and being dependent upon the condition of the weather and the disposal of my time during the next few days.

Halley's Comet

My dear Mr. Clute:

I am sending this print, thinking that it may be of interest to your readers. The negative was made here at Mount Wilson with my 4x5 Korona camera and Zeiss Tessar lens, mounted on an equatorial axis driven by a driving clock, the arrangement bringing the horizon across the corner of the plate. The lens was used at full opening, F-5.7, and twenty-six minutes exposure given on a rapid plate. I have purposely printed it a little light, as darker printing causes a loss of the fainter portion of the comet's tail. If the picture is turned so that the bank of dark clouds in the lower right-hand corner is brought horizontal, the true relative positions of the comet and Venus, as seen at that time, will be obtained. The exposure was made from 3:30 to 3:56 A. M., Saturday, May fourteenth.

Yours sincerely,
EARL S. MESSER.

Mt. Wilson Solar Observatory.

Third Annual Convention I. M. P. A.

Secretary-Treasurer's Report

The Third Annual Convention of the Intermountain Photographers' Association, held at Ogden, Utah, was called to order Monday, April fourth, 1910, at two-thirty P. M., by President F. E. Scott. Minutes of the previous meeting were read and approved. A few talks were made, mostly of the "glad to be with you again" order. A social, at the hall the same evening, was a furtherance of this get acquainted spirit. The members were entertained by the Ogden Quartette, and the Idlewild String Orchestra, and a pleasant evening was spent. All expressed their desire and readiness for the real work next day. Commencing at ten A. M., Tuesday, a short meeting was held and then a skylight demonstration by Felix Raymer, assisted by William Stewart of the Eastman Company, at the Crawshaw Studio.

At the afternoon session a resolution was passed affiliating the Association with the National Congress of Photography, delegates to be appointed by the executive board. At three-thirty a special excursion train in charge of President Scott took the members to the beautiful Ogden Canyon where the scenery is unexcelled by any in the country. Plates were exposed at nearly every turn of the canyon, frequent stops being made. After four hours of mountain climbing and sightseeing had been enjoyed the party returned with a hunger that enabled it to do full justice to one of the most delightful banquets ever served on such an occasion. Felix Raymer acted as toastmaster; he, Harry M. Fell of the Eastman Kodak Company, Frank E. Dean, J. A. Christensen and others, did most of the talking, and all were enthusiastic. It being Salt Lake City day a banner attendance was registered.

A GROUP OF SOME OF THE MEMBERS.

Wednesday morning was given to plate demonstrations by William Stewart, negatives being made from poses by Raymer. The afternoon session opened at two o'clock. Salt Lake City was unanimously selected as the next meeting place. Officers were elected as follows:

CLASS A PRIZE. By LEROY KELLOGG.

J. C. Cooley, Salt Lake City, President; Mrs. G. W. Tripp, Ogden, Vice-President; Chas. D. Gallagher, Ely, Vice-President for Nevada; D. C. McCandless, Boise, Vice-President for Idaho; Leroy Kellogg, Denver, Vice-President for Colorado, and M. F. Jukes, Rawlins, Vice-President for Wyoming. Demonstrations by Harry M. Fell and George Young on Arturo and Eastman papers from two-thirty to four, and Cyko demonstration by F. C. Muller and H. Walters of the Ansco Company from four-thirty to six.

Thursday morning, the last day, was spent mostly in closing up the business of the convention. A fine business talk by Harry M. Fell was greatly enjoyed. Prizes were awarded as follows: R. C. Nelson, Hastings, Nebraska, Grand Portrait Class; Leroy Kellogg, Denver, Class A; Charles D. Gallagher, Ely, Nevada, open to towns of less than ten thousand; Ralph Savage, Salt Lake City, View Class, and L. F. Griffith, Salt Lake City, Salon honors. In the afternoon the hall was thrown open, to permit the public to view the large display. A splendid display had been sent by W. S. Lively of the Southern School of Photography, and "Camera Craft" furnished a collection of very fine work made up of one print from each of the leading San Francisco, Oakland and Berkeley studios.

We wish to thank the loyal members who attended and helped to make our Third Annual Convention a success; and also the manufacturers, dealers and others whose liberality made possible our entertainment features. We would further announce that plans and arrangements are already under way

GRAND PORTRAIT PRIZE.
THIRD I. M. P. A. CONVENTION.
By R. C. NELSON.

for our next meeting, and concerning them you will hear many times during the coming year. The Treasurer's report was as follows:

Received from Secretary Scott	$ 23.95
Receipts of Session	601.50
	$625.45
Total Expense	502.75
Balance in Treasury	$122.70

Respectfully submitted,
J. C. COOLEY,
Secretary-Treasurer.

Window Lighting versus "Sky-Light"

By F. Morris Steadman

With Illustrations by the Author

A few years ago there was waged a wordy war, in the pages of the "British Journal," between an advocate of the necessity of a skylight and another who advocated a side light of the window type. When the discussion was brought to an end by the editor, the final contention of the skylight champion was that one should be able to secure a light reaching the subject at an angle of forty-five degrees, at least, from the horizon, in order that the lighting might be effective and practical. But, let us take a subject and place him so that the head comes against the casing on the further side of our ordinary window. We will find that the light comes above near the zenith, or from an angle of about eight degrees from the horizon. Thus we more than fulfil the requirements of the skylight champion.

A HOME PORTRAIT.

A popular writer not long ago gave us a very readable article, in which he advocated the glazing of the entire light with ground glass in order to soften the illumination. As to softness, stop and consider the atmosphere itself. In it we have a curtain of a transparent medium so colorless that a mile, more or less, of it interposed between the eye and the object, a distant hill, for example, is necessary to give that object a tinge of blue. It is impossible to mentally conceive a light source so ideally soft as the atmosphere. According to the scientists, the layer of air, our atmosphere, that surrounds the earth is about three hundred miles thick, and yet it is just sufficient to produce a curtain of blue before our eyes. The light of the moon and the stars passes through it readily. Still, we are advised to shut

out this soft medium with a wall of ground glass. Don't do it. On the contrary, whenever convenient, drop the upper or raise the lower sash of the window so that the unobstructed light from the sky will illuminate the face of the subject. Common window glass robs the light of about fifty per cent of its strength, while ground glass shuts out from eighty-five to ninety per cent. And this without any gain in softness as regards the illumination of the face of the subject, as s o f t n e s s is dependent upon the distribution and not the weakness of the light. The closer the head of the subject be placed to the window, the greater is the width of the angle at which the light from all parts of the window reaches the face, and consequently the softer the lighting, i. e., the less contrast.

A WINDOW LIGHTING.

Inside an ordinary window, a distance equal to its width, one having an unobstructed view of the sky, yet no sunlight striking the window itself, the first visible tint on a piece of Solio paper will be found to be approximately four seconds on a clear day; that is, with the sun at an altitude of forty-five or more degrees. Lowering the top sash and allowing the unobstructed light from the sky to reach the tinting paper held at the same d i s t a n c e from the window, the time will probably be found to be two seconds. If the window be glazed with ground glass, the tinting time would no doubt be increased to sixteen seconds, necessitating an exposure eight times longer than would the clear light from the sky. This is supposing that the contrasts in the face of the sitter are normal in both cases. No advantage is gained by using the ground glass, and it is difficult to understand why it is used, since it so prolongs the exposure. I have recently been experimenting with a form of cloth screen that does not lengthen the exposure while minimizing the necessity of a reflector, but the subject is one that I shall save for a future article. properly illustrated. On a slightly cloudy day, it would be difficult to secure anything but a soft lighting on a face photographed, let

us say, against the trees or foliage of a lawn; yet the intensity of the light might be doubled or quadrupled and the same soft lighting secured just inside an ordinary window. Therefore, in making portraits by an ordinary window, take the sitter close to it and secure the desired softness by turning the head in the right relation thereto and then illuminating the shadow side with a properly placed reflector. The problem is not to reduce the intensity of the light, as it is all needed to shorten the exposure, but to so distribute the light as to give the face the gradation and softness required for good modeling.

And I would like to add a few words about developing, even though the subject is not closely associated with my title. I am convinced, by my experience in helping others, that, should ten amateurs be shown how to light as many heads rightly and make the exposure correctly by giving a normal exposure by a correct method of light measurement, and then proceed to develop the plates or films, nine out of the ten would develop too far, getting double the correct opacity or depth of deposit. It is difficult for the worker, particularly the beginner, to realize the readiness with which a normally exposed negative can be carried beyond the correct opacity in development. The results of overdevelopment are fatal to good results, especially when dealing with subjects of full normal or maximum contrast, such as heads lighted by an ordinary home window. The density of the delicate tones becomes too opaque, forming high lights, thus giving an effect of contrast that is often blamed on the lighting. Do not overdevelop with this class of subject.

An error, but one of no consequence except as a misstatement in itself, crept into my article in the last or May number. In a paragraph near the end, I am made to say that a lens of the speed of f-6.8 requires one second exposure as against a lens of f-8 stop requiring four seconds. What I intended to say was that the four seconds of the f-8 lens were reduced one-fourth, or to three seconds. The article was written on the train, and the omission of a few words in revising caused the error.

Hall Camera, one-eighth inch slit; Wollensak lens at full opening.

Photographing Moving Objects

By N. H. Freudenheim

Illustrated by the Author

One-eighth inch slit, lens wide open.

In approaching this branch of instantaneous photography, perfection in which so many amateurs as well as professionals have reached quite as much by virtue of the cleverly designed apparatus placed in their hands by manufacturers as by their own application and study, we should, I think, first consider the question from the standpoint of what is possible by an experienced photographer properly equipped so far as implements are concerned, and then touch upon what the inexperienced amateur may achieve with similar tools under the conditions which generally attend his early efforts.

We have, of course, all heard of the wonderful things the "man behind the gun" can do with any sort of camera and any make of lens, but in these days of perfected apparatus and endless text-books we no longer require to make "necessity the mother of invention," as we can readily find right at hand the latest devices guaranteed to insure success if we are willing to profit by the experience of others who have spread broadcast copious notes on their methods and results. No matter how clever an old photographer may be in other branches of the art, the moment he essays to put upon a plate a sharply defined picture of a moving object, be it a running or jumping athlete, a leaping horse, a racing automobile, a flying trapeze performer, or what not, he finds himself no longer the calm, deliberate operator, but wrought up to high tension and ever on the qui vive for the unexpected. With plates of extreme speed, fast shutters, and a wide-open anastigmat lens, he must judge his distance in an instant, forget, for a moment, everything he has ever learned about depth of focus and composition of a picture, and rest satisfied with the portrayal of his central object, without regard to background or surroundings.

The action photographer must concentrate his mind and sight upon the moving body, whatever it may be, wait for it to come into sharp focus, and then make the exposure. Perhaps three, four, or in some cases a dozen; such exposures have to be made in as many minutes, and seldom is the action photographer satisfied with only a single shot. The old adage that

Both, one-fourth inch slit; Wollensak lens at full opening.

"he who hesitates is lost" more particularly applies to this class of work than anything else the owner of a camera can undertake. It will, therefore, be readily understood that old methods must be laid aside and every advantage taken of implements of improved design. According to the nature of view and speed desired, the object may be taken coming head on, at an oblique angle, or passing straight across the field of the lens. It will at once appear that the latter must be taken at many times the speed of either of the former, and, to avoid any blurr, the distance must be allowed for. The artistic photographer may maintain that slight movement shown in the finished print adds to the realism of the picture, but I have always found it more advisable to consider the possibilities of future reproduction, mostly by enlargement, and so have invariably endeavored to take an object at such speed as will insure microscopical sharpness, as, of course, every

Both, one-eighth inch slit; Wollensak lens at full opening.

one knows that copies of a really good action photograph will be in demand, and, unless it is sharp, it will never reproduce satisfactorily.

Now, my experience has taught me that we cannot obtain this result without a high-grade lens of reasonable depth at wide opening so as to insure the best possible lighting of the scene and of the plate, and a camera reflecting the full-sized image, fitted with reliable mechanism that will give the most rapid exposure at the precise instant that the object comes into sharpest focus. The box must also be of such construction that it will not be affected by hot or cold weather and will stand ordinary rough usage. It is needless to say that the camera for all-around work must be one that can be carried about and operated in the hand, thus doing away with the

clumsy tripod. In saying all this, I have not the slightest wish to decry the stand camera with "between-the-lens" shutter and the various attachments which most of us have given a thorough trial, and which some of us still swear by. But I unhesitatingly maintain that, to get the greatest percentage of satisfactory results with the least expenditure of time and trouble, nothing else can compare with the camera of reflecting type.

For handiness, ease and quickness of operation, compactness, and weatherproof construction, I have come to rely wholly upon the Hall reflecting camera fitted with the Wollensack anastigmat lens, the latter of ten-inch focus on the 5x7 box. This gives me splendid lighting and a comparatively large object at long distance, with angle sufficient for most purposes so far as rapid outdoor work is concerned. A shorter focus lens of same make and giving wider angle on this size of plate is, of course, available. During two years of the most strenuous work, I have never known this outfit to fail me; and it is really surprising what a vast variety of work has been accomplished by it under conditions which I have often thought perfectly hopeless. To accentuate this, I submit a set of prints which will, I think, clearly demonstrate the possibilities of the camera and lens referred to. In pursuit of business, I annually make the round of the fashionable horse shows, polo tournaments, race tracks, steeplechase meetings, athletic grounds, baseball and football matches, etc., and any one who has ever attended any of these functions will readily understand what divergent conditions of weather I have had to work under. With my camera in hand that can be instantaneously set from the outside for any speed desired, and with a dozen or more rapid plates in their holders, carried in leather case, I have never yet failed to cover satisfactorily the most difficult newspaper assignments, and I have still to meet the situation that I could begin to cover as well with any other outfit that I know of.

As distinguished from the lack of interest shown by amateurs in the heavy and cumbersome professional old-style outfits that I previously used, I have invariably found young photographers eager to examine and try the Hall reflecting camera, because it appealed to them as being so easy to operate and so certain in results. As a matter of fact, there need be no schooling to become proficient in its use. The moment an amateur looks into the camera, sees the image brilliantly illuminated right side up, focuses it sharply, presses the exposure release, and winds up the curtain, he knows the operation of the whole thing, and thenceforth it is only a question of his own acuteness in focusing his object and exposing at the right moment to secure a good picture of anything he chooses to try for. In fact, I believe it is easier for an amateur to adapt himself to the use of this outfit than any other I have worked with.

Art deals with things forever incapable of definition, and that belong to Love, Beauty, Joy, and Worship, the Shapes, Powers, and Glory of which are ever building, unbuilding, and rebuilding in each man's soul, and in the soul of the whole world.—Plotinus.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, JUNE, 1910. No. 6

That Advertising Contest

There were two hundred and seven ballots cast, and it has involved a vast amount of work to compile the results therefrom. A ballot would read, "Eastman Kodak Company" for a certain place, and the letter would have to be read over to find out which one of the Eastman advertisements was intended. However, two judges and a stenographer, working two entire mornings, produced some very interesting figures as a result of their labor. The theoretical prize ballot should read as follows: Eastman Kodak Company, Multi-Speed Shutter Company, The Taylor-Hobson Company, Simplex Intensifier Company, and Ansco Company.

There was not a single ballot cast conforming exactly with the above and only four ballots cast containing four out of the above five names. Of these four ballots containing four of the five names, only one had the first two rightly placed and all four in their right rotation. So there was no chance of a doubt as to the winner. The fortunate individual is Percy M. Reese, 1201 North Charles Street, Baltimore, Maryland. His ballot reads as follows: Eastman Kodak Company, Multi-Speed Shutter Company, Simplex Intensifier Company, Burroughs, Wellcome & Company, and Ansco Company.

In the order of actual number of votes received, regardless of place on the ballot, the list would read as follows:

Eastman Kodak Company, The Taylor-Hobson Company, Ansco Company, James H. Smith & Sons Company, and Simplex Intensifier Company. The judges compiled another list showing what they called the "efficiency table" from their checking up of the votes. This is based on a credit of five points for each first place vote, four for second place, and so on, the total being multiplied or divided in accordance with the space occupied by the advertisement. This is of course of no great value, as the results are really little more than estimated ones. The only interrupted advertisement having a high "efficiency" is that of the Multi Speed Shutter Company which was discontinued in January and not resumed until after the contest closed. It is not included, although estimated as having an "efficiency" well near the top of the list below. This table reads as follows: The Taylor-Hobson Company, 284; Simplex Intensifier Company, 212; Eastman Kodak Company, 196; F. M. Steadman, 176; James H. Smith & Sons Company, 164; Ansco Company, 160; O. C. Wold, 128, and Burroughs Wellcome & Company, 112. Kilborn Photo Paper Company, Hall Camera Company, Burke & James, Vote-Berger Company, and the more recent advertisements of the Japanese Water Color Company, all showed a high "efficiency." But,

one can realize that there would be little consistency in the Simplex Intensifier Company or Mr. Steadman using large space, or in the Eastman Kodak Company cutting their advertising down to the quarter page used by the two first named. The ballots brought out very clearly one particular point, and that is that an advertisement must be in agreement with the size and importance of the firm it represents. If the advertiser is putting out one low priced specialty, he can secure a very high efficiency with a small advertisement if the space is well used. The Simplex Intensifier with its quarter page announcement secured the fifth largest number of votes. Another encouraging point for the small advertiser is brought out in these tables when we compare the results of advertisements written by the advertiser himself with those ads produced by professional advertising experts. The Taylor-Hobson advertisements are got up by Mr. Ronald Taylor, and they secured eighty-one votes as against eight for another series of advertisements for a well known high grade lens, occupying the same space, and produced by a professional advertising man. In fact, the advertisements of high "efficiency" are practically all of home manufacture. This does not imply that the advertising expert does not have his value, but it does seems to indicate that the average advertising man, either through a lack of knowledge of photography or the interests of its devotees, is somewhat of a failure when it comes to appealing to the users of photographic goods. The next most important deduction that can be reached from the results is that a picture is almost essential in a photographic advertisement. A large proportion of the voters mentioned this fact in no uncertain terms.

And, before closing, we would like to mention that no undue advantage has been given the firm placed at the head of the prize ballot through a neglect to take into consideration the amount of space they use. Only those ballots were counted directly for them that clearly and unquestionably indicated the three consecutive pages they use each month for double column reading matter. Their full page advertisements were counted separately; and, with the exception of the two well illustrated tank advertisements, were found of only average interest by the voters. And, of their many page advertisements, these two were illustrated by good photographic illustrations that told their story as well as attracted. The Taylor-Hobson advertisement always makes a striking picture a feature; and the James H. Smith & Sons advertisement leaped into prominence in the voting only when the picture of the charming lady was made a part of the announcement. So also with the Ansco advertising; the attractive reproductions of a photograph at the head of the March advertisement at once brought them an increased number of votes. Had all their advertisements been illustrated in like manner it is quite probable that their position on the prize ballot would have been much nearer the top. And another matter that must not be overlooked is the futility of an advertiser demanding a certain position each month. Only one out of the few inflexibly fixed position advertisements that we carry each month received more than a very trifling vote; three of the ten such that we carry received only one vote each, while but the one exception succeeded in getting into the "efficiency" table.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

MAKING NEGATIVES FROM NEGATIVES AND POSITIVES FROM POSITIVES.

This subject has a great fascination, and I have given in these pages many processes for its accomplishment. I regret to say that personally I have had but poor success with any. The Rev. F. C. Lambert has recently given a summary of the best-known methods, which may act as a stimulus to other workers.

In the "Amateur Photographer" of December twenty-ninth, 1908, may be found working details of making an enlarged paper negative direct from a small glass plate negative by means of an ordinary enlarging lantern. The bromide paper is exposed, developed, positive image removed by acid permanganate, washed, exposed to light, again developed, washed, fixed, washed, and finally dried.

It may be of some interest at the moment to give a brief outline of some other methods and formulae which have been suggested either for obtaining positives direct in the camera instead of negatives in the ordinary way, or obtaining negatives from negatives or positives from positives.

Ammonium Persulphate Process.

We may now primarily and chiefly consider the case of glass plates rather than bromide paper. First, as to the use of ammonium persulphate in place of the previously mentioned acid permanganate for removing (dissolving) the first developed image. The best results are obtained with somewhat thinly coated slow plates, such as lantern plates. The exposure should be about one and a half times that for an ordinary lantern plate effect. Any developer will serve that works without stain or fog and gives a good range of tones. Development is carried on until the shadow detail is seen right through at the back of the plate. If development be underdone, a fog veil will result in the second development. The strength of the ammonium persulphate bath varies from three to ten per cent., according to different exponents. After this bath has removed the image, the plate should be bathed in a two per cent. solution of soda sulphite to remove any traces of brown coloration or staining. For the second exposure with a lantern plate, half a minute at one foot from an ordinary gas flame will probably be about right. Glycin, amidol, pyro soda, and metol quinol are all mentioned as suitable both for the first and second development.

Hydrogen Peroxide Process.

This is also a method designed to dissolve away the first developed image by means of hydrogen peroxide, which removes both the silver and gelatine, and replaces the acid permanganate in the third step. The proposed bath consists of water one ounce, hydrochloric acid fifty minims, barium peroxide anhydrous twenty grains, or hydrated thirty-six grains. The plate is gently swabbed with a tuft of cotton-wool after this bath, and then washed.

Iodine Process.

After first development, the plate is bathed in water one ounce, potassium iodide fifty grains, iodine five grains, until the silver image is converted into pale yellow silver iodide. Then washed, exposed, and again developed and fixed, etc. In this case the fixing takes a long time, as the silver iodide is but slightly soluble in hypo. A very weak solution of potassium cyanide might be used.

Balagny Process.

Developer—Water five ounces, soda sulphite ninety grains, quinol seven grains, soda carbonate seventy-five grains, potassium bromide twelve grains, alcohol five drams. Development should be slow and prolonged, and the developing dish kept covered. Plate is well washed, laid with its glass side down, either on black paper or in ebonite dish, and exposed to daylight until high lights are slightly grey—say half-minute in diffused light. Plate now bathed in water one ounce, potassium bi-

chromate seven grains, nitric acid five grains, until first image vanishes. The plate is quickly rinsed, and then the developer applied a second time, and full time allowed. The plate is passed through fixing bath, washed, and dried.

Namias' Process.

The developed plate is bathed in water one ounce, potassium bichromate seven grains, chromic acid sufficient to render the solution strongly acid. The plate, while in this solution, is exposed to diffused daylight until the first black silver image is converted to silver chromate. The plate is now well washed, and the silver chromate image dissolved out by bathing the plate in water seven ounces, soda sulphite one ounce. The plate is again well washed, exposed to candle or lamp light, and developed with water four ounces, soda sulphite seventy-five grains, amidol nine grains, fixed, washed, and dried.

Bolas's Process.

This dates back to about 1880. A gelatino-bromide plate is bathed for two to three minutes in three to four per cent. solution of potassium bichromate, the surface blotted off, and plate dried in the dark. It is then printed in daylight until the image is clearly visible at the back, e.g., two to five minutes in sunshine, ten to thirty minutes in diffused daylight. The plate is now thoroughly washed in the dark, and then developed with pyro ammonia or ferrous oxalate. The plate is again washed and fixed, etc. Where the light has acted on the bichromated gelatine a kind of tanning action is set up, so that the developer affects this part very little, if at all.

Stain and Negative Process.

This follows the lines of the Bolas process. A gelatino-bromide plate is fixed, washed, and then sensitised with potassium bichromate, dried, printed, and washed. The plate is now immersed in a suitable dye, which only affects the gelatine where it has not been affected by the light passing through the printing negative.

Waterhouse Process.

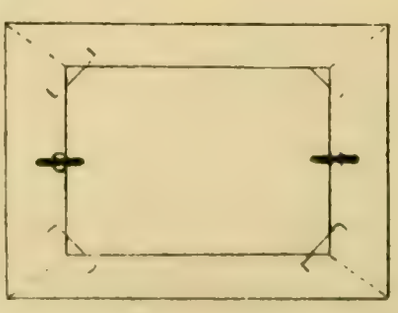
This is a reversal development process direct. The following formulae have been published: (A) Water, one hundred parts; eikonogen, one part; soda sulphite, one to two parts; lithium carbonate, one part. (B) Saturated solution in alcohol of tetra-thio-carbamide-ammonium-bromide. For a developer, take one ounce A plus five drops B. Before applying the developer, the plate should have a brief preliminary bath of two and one-half per cent. nitric acid, and then be well washed. Second formula: Water, five hundred parts; eikonogen, five parts; soda sulphite, ten parts; and soda carbonate, eight parts; potassium bromide, ten parts; thio-sinamine, one-eighth part. Third formula: Water, two ounces; soda sulphite, fifty grains; eikonogen, fifty grains; lithium carbonate, fifty grains; and thio-carbamide, fifty grains.

Reversal by Prolonged Exposure.

Exposure required, about one thousand times that for normal negative results. Too short exposure gives a mixture of positive and negative results. A slight preliminary exposure is thought to aid reversal, especially if to red light. Better too generous exposure, as several thousand times normal exposure still gives reversal effects. A suitable developer is: Water, one ounce; potassium bromide, three grains; pyro, three grains; soda carbonate, nine grains; and soda sulphite, twenty-seven grains. Development should be carried on until the image seems to be lost in a slight fog veil. This will be considerably reduced in appearance in the fixing bath.—"Amateur Photographer."

AN EASILY MADE BUT EFFECTIVE PLATE CARRIER.

Although a photographer does well to stick to one size of plate, and that a popular one, so that the plates are easily bought and are likely to be fresh and not stale stock, it may sometimes happen that he wants to use some odd size of plate, and does not care to be at the expense of purchasing a carrier for it. When this happens, it is well to know that an efficient carrier can be made in a very few minutes, with material that is likely to be at hand.



The basis of the carrier is a piece of stiff cardboard about as thick as the ordinary glass plate. If

this is not to be found, a couple of pieces of the thin card from a packet of sensitive paper will do, but one thickness of this has not enough substance. A thin coating of gum should be given to one side of each, and they should then be tightly pressed together and allowed to dry under pressure.

The card is then cut to the size of the plate in general use, if it is not already that size, as is most likely. Diagonal lines, as shown in the sketch, may be drawn upon it to determine its center, and then the place to be occupied by the new size of plate is easily marked out, and cut right out with a sharp knife. In cutting, a slight clearance must, of course, be allowed, as the plate has got to lie in the opening so left. Particular attention should also be given to see that the corners are square.

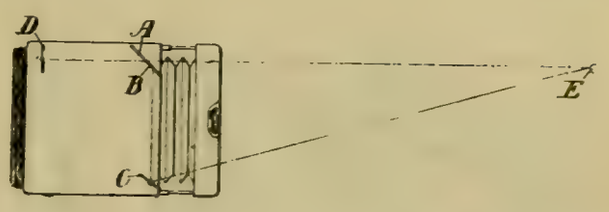
Across the four corners wire supports are then fixed. The wire bindings of "Photography and Focus" answer capitally for this purpose, and the two right angles in which they are bent, when half straightened in order to take them out, will be just what are wanted. Two holes at the right distance are pricked in the card with a needle, and the wire pushed through and bent over. It only remains to insert two paper fasteners, as shown in the sketch. These paper fasteners must be put through a circular hole in the card, and not a slit, as they are wanted to turn, so as to form catches to hold the plate in position.

A coating of dead black, which may be extemporized out of boot blacking and water, or Indian ink (ordinary ink is too blue to be much use), completes the carrier.—W. W. Wood, in "Photography."

A NEW ARRANGEMENT FOR FOCUSSING.

The ingenious arrangement which is illustrated below has been patented by S. N. Player, the particulars being communicated to us by Messrs. Leechman & Co., patent agents, of 18 Hertford Street, Coventry, to whom we would refer any of our readers who wish for further details.

The idea is a sight or finder which is attached to the camera and enables the user to keep the object focussed, without any reference to a scale, and without a ground glass. A glass screen is employed, of which the portion A is transparent, the



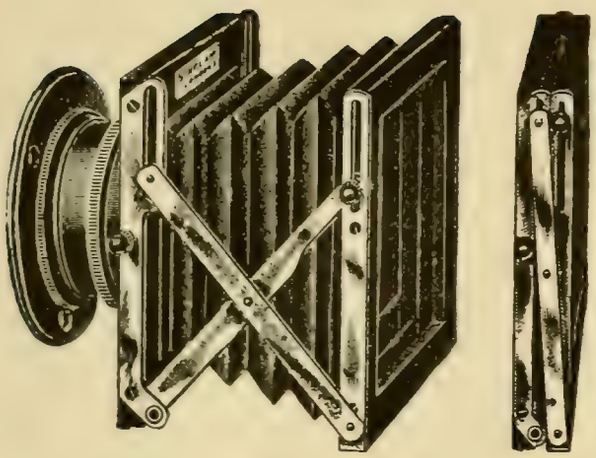
portion B being silvered to form a mirror. At a suitable distance from this a second mirror C is arranged, which is adjustable on its pivot. At D is a sight. Assuming the object to be at E the operator looks through the sight D, and through the transparent part of A until he "finds" the object. He then adjusts the pivoted mirror C until a vision of the object is transmitted on to the mirror B as shown by the lines.

It is obvious that if the object O is moved nearer to or further from the camera the mirror C must be turned through a certain angle to bring the image again on to the mirror B. The pivoted mirror C is connected with the lens, so that as it is moved to obtain the effect referred to, the lens is moved for focussing purposes. All, therefore, that the operator does is to obtain a reflected image on the screen B alongside the actual object as seen through the glass A. He then knows that the focussing has been correctly effected.—"Photography."

LENS HOODS.

There is no more important (and, unfortunately, generally neglected) adjunct to the camera than a lens hood. I believe that its neglect is responsible for more weak and ineffective negatives than any other cause. The Sinclair hood here described and figured is not, I believe, on the American market; but home workers may adopt the principle or send to London for it.

The tendency in many modern lenses to cut down the hood to the very smallest possible dimensions is one which we have had to condemn on more than one occasion. The optician cannot very well help himself, as upon the removal of the hood depends the possibility of using his lenses in the ultra compact collapsible cameras, which the photographic public now demands; and the photographer who is troubled with diffused light in his camera, due to the powerful illumination of its bellows, has no course but to provide his



lens with some temporary or makeshift hood.

J. A. Sinclair and Co., 54 Haymarket, London, S. W., England, provide a more permanent and workmanlike hood in the little piece of apparatus, which they name the Sinclair Collapsible Lens Hood. Instead of describing it at length, we give an illustration, which shows at a glance the nature of this very useful and timely accessory. It is small enough to be slipped into the waistcoat pocket until required for use, is secured to the lens by a set-screw, and can be fixed at any extension that may be desirable by another. The Sinclair hood is beautifully made, and is a neat and elegant solution of a very real difficulty. It sells, in a size large enough for lenses up to one and seven-eighths diameter, at three dollars, net.

ENLARGED NEGATIVES

R. J. Wallace, writing in the "British Journal of Photography," makes a strong plea for the use of a soft working fast plate for the intermediate positive transparency in the making of enlarged negatives. He contends that all the difficulty in obtaining identity of gradation between the original negative and its enlargement is due to a neglect of this requirement. Personally I never make enlarged negatives from glass transparencies; but when, in the past, I did, I found Mr. Wallace's contention to be true.

THE REDUCTION OF NEGATIVES.

The well-known worker, R. E. Blake-Smith, in a letter to the "British Journal of Photography," writing on the above subject, says:

I maintain that in the great majority of cases one wishes to reduce the darker parts of the negative more than the lighter ones. I published a method of doing this in "Photography and Focus," February second, 1909. I have lately slightly improved the details of the process. I now advise that the following three stock solutions be kept:

I. Potassium permanganate...20 grains
Water ..... 2 ounces
II. Sodium chloride (common salt) ..... 1½ ounces
Sulphuric acid (concentrated) ..... 1 ounce
Water ..... to 10 ounces
III. Sulphuric acid (concentrated) ..... 1½ ounces
Water .....to 10 ounces

The negative to be treated is first well soaked in water. It is then immersed in:

I. ..... 10 minims
II. .....120 minims
Water ..... 3 ounces

The negative bleaches slowly in this bath, and the progress of the bleaching operation is carefully watched, chiefly by looking at the back of the negative. When the darker parts have been sufficiently bleached —the degree, of course, depending on the special circumstances of the particular negative—the plate is taken out of the solution and washed. After washing is complete the negative is immersed in:

I. ..... 40 minims
III. .....100 minims
Water ..... 3 ounces

After all the metallic silver has been dissolved out the negative is again washed, and then redeveloped. I know of no better redeveloper than:

Metol .....20 grains
Sodium sulphite (crystals) .....60 grains
Sodium carbonate (crystals) ..... ½ ounce
Water ..... 5 ounces

The slight yellowish stain which is formed in the permanganate bath (due to an oxide of manganese) will disappear in the redeveloper. This differential reduction method will, I am sure, prove of great value under such circumstances, as occasionally arise, where we have to deal with a subject showing great extremes of contrast. No direct method of producing a negative will enable us to differentially alter to any appreciable extent the amount of contrast between the various moderate tones and the amount of that existing be-

tween the extreme ones of the subject. By the use of my reduction process a photographer can expose and develop his negative so as not to sacrifice the half-tones, and still finally obtain a result free from all objectionable hardness.

I do not say that the preservation of clearly contrasted half-tones is always desirable from an artistic point of view, but it certainly very often is; nor, of course, do I say that the avoidance of harshness means always the sacrifice of proper half-tone contrast. I am sure, however, that many a photographer must sometimes have felt that he has been sacrificing the half-tones of a subject in his desire to avoid hardness of extreme contrast. My method does not enable one directly to correct too great shadow density in the picture, but this can, of course, be done by making a positive, treating this, and then making from it another negative.

BORING HOLES IN GLASS.

A writer in the "Scientific American," in dealing with this subject, describes a method that seems very simple, and is certainly quite easily tried. Instead of a drill, a brass tube with a smooth end is used, and is revolved in a brace or hand-drill stock. A hole is bored in the side of the tube, through which hole a lubricant is applied as required, and the end of the tube is charged with carborundum powder or diamond dust. A special lubricant is strongly recommended. This consists of pulverized camphor, two ounces; sulphuric ether, six drams; and turpentine to make six ounces. The use of ether is new to us, but the other ingredients are common in lubricants used for glass cutting, turpentine alone being very effective. For boring large holes the writer recommends the use of an emery wheel mounted on the end of a bar, which is held in a drill holder. This is a more complex arrangement, and the tube device will no doubt be sufficient for the boring operations likely to be required by photographers. It is recommended that a piece of wood with a hole to take the drilling tube be cemented to the top surface of the glass to be bored, while another piece of glass is cemented underneath to take the drill end as it comes through. We should be inclined to suggest that copper tube might be superior to the brass tube, copper being the metal usually employed in glass-cutting tools. The same writer comments on the ease with which glass can be filed, especially when the proper lubricant is used. It is strange that many amateur workmen fail to realize this fact, and they frequently send small cutting jobs to the glass-worker when they could do them themselves in a few moments. With turpentine as a lubricant, or the special fluid recommended, glass can be filed as easily as, and rather more quickly than, iron or steel. A bastard file should be used first, to take off the bulk of the glass. This should be followed by a second-cut or medium file until the final form is just reached and the sharp edges are beginning to be formed. A finish with a dead-smooth file then completes the work, and quite sharp angles can be preserved if too much is not attempted with the rough file in the first instance.

ON SUPPRESSION OF DETAIL.

Many ways are advocated to obtain softness through all the planes of a picture, such as separation of the component parts of the lens, vibrating the camera, and the use of printing dodges. To these, according to H. T. Black in the "Amateur Photographer," must be added such a choice of lighting as will place the source of illumination directly overhead. The cuts showing the effect of taking the same picture with the sun behind the camera and also directly above well bear out his contention.

THE AUTOCHROME FILM.

What is the thickness of the film of an autochrome plate? Some interesting experiments made by Edgar Senior show it to be about one-two-hundred-and-fiftieth of an inch. Of this thickness about one-half is occupied by the varnish which holds the colored starch grains, the starch grain layer is less than a twelve-hundredth of an inch thick (0.2 mm.), and the varnish over the starch grains yet half this thickness. The sensitive emulsion is about the same thickness as the starch grain layer. It appears from Mr. Senior's experiments that in some places there are two starch grains superposed. Chapman Jones, in the current issue of "Knowledge," says that he finds the maximum diameter of the granules to be about .014 mm., and hence some of the granules are probably a little distance off the plate, if not actually on the top of others.

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

PHOTOGRAPHING INTERIORS.

A subscriber in the Middle West sent me some prints recently and asked me to suggest means and ways of improving the work. They were all interiors, mostly the interior of a foundry and machine shop, where the hydraulic and electrical cranes and overhead lifting apparatus was of more importance than the immediate foreground. He had met with a number of difficulties. The exposure time was the one that caused the most trouble. Then the tripod legs would not stay where put on the smooth stone floors; and, when the front leg was brought close up in order to point the camera upward, it became still more unstable. Raising the lens had caused the bellows to cut off part of the plate, and the poor light had prevented his noticing it until he came to develop the plate. Halation had nearly ruined several of the negatives and many of them were not sharp in the plane focused upon, despite great care in focusing with the full open lens. Let us suppose our friend is given an opportunity of doing the work again. If he is not familiar with the Steadman method of determining the exposure, let him do this: Cut a star-shaped hole in the cover of an ordinary pocket memorandum book and supply himself with a few strips of Solio paper. Let him set up his camera in his own home and, using stop f-32, make a series of ten-second exposures, drawing the slide out about an inch each time. If there are six such made, the strips on the test plate will have had six different exposures ranging from ten seconds to sixty seconds, and one of them will be about right. But just before making these tests he should expose a strip of Solio under the star-shaped hole in the book cover, starting with ten seconds and doubling each time. Suppose he finds that thirty seconds gives a just barely visible image of the star-shaped opening in an average lighted part of the room and that the 30-second strip on the plate is the right exposure. He then knows that the Solio tinting time is the same as the actual exposure required with stop f-32. Then the shop interiors become simply a matter of testing the light with a strip of the Solio paper. If it takes ninety seconds or a minute and a half to get a tint in a medium lighted part of the shop, he knows that is the correct exposure with stop f-32. Using f-22 the exposure will of course be half, or forty-five seconds. The tripod points are easy. Stick them into corks or do as I saw an old professional doing the other day, slip over the end of the legs some short pieces of rubber hose. And, if the camera is to be tilted upward, have two small pieces of board hinged together at one end. Have the tripod screw engage the bottom one while the upper one carries its own screw which engages the camera. All that will then be needed is a wooden wedge to insert between the two loose ends to secure any desired inclination of the camera. The back of the camera being brought plumb after, doing both only after the lens has been raised as far as the construction of the camera front will allow. It is assumed that the lens will cover a much larger area than is necessary when placed centrally with the plate. As to the bellows cutting off a part, this can be determined by removing the back and placing the eye at each corner in succession. If the entire opening of the lens can be seen from each corner, no part of the plate will be cut off. If not, the bellows must be pulled back out of the way. The lack of rightly placed focus is due, no doubt, to the fact that, with some lenses, inserting a small stop changes the position of the plane of best definition. This should be tested by examining the image of a well-lighted object fairly close at hand; first, focused with the lens full open, and lastly with a small stop inserted. If the focus is found to change, it will be advisable to focus again after stopping down the lens, doing

so by having someone hold a clearly printed piece of large letter card or paper at the point decided upon as the one wanted most sharp. If the printed matter is not strong enough for the purpose, use a lighted candle. The halation most likely results from using an unbacked plate and forcing it in development. One should use a backed or double-coated plate and give sufficient exposure, thus avoiding all necessity of forcing. In fact, I have seen most surprising results secured on ordinary plates by developing full exposures with a quick-acting, strong developer. The surface only of the plates seemed to be developed by going about it in this way, while the emulsion down against the glass support where the most of the halation exists, was hardly given time to be acted upon by the developer. The negatives are inclined to be thin, but slight intensification easily remedies all this. So we can see that there is a quite simple remedy for any and all of the difficulties which our subscriber has encountered.

STALE PLATINUM PAPER.

Talking over platinum printing with an old hand at the work the other evening resulted in his dropping a few hints that may be valuable to others. Platinum paper that has matured somewhat, by not being used immediately upon opening of the sealed package, gives softer, less brilliant prints than does the fresh, suggesting its suitability for hard or contrasty negatives. Paper that has been in a tube two or three weeks after being first opened is always selected for such negatives. This does not mean that the paper has been left unprotected by the tube and the calcium chloride which it contains. This ripened paper produces prints warmer in tone and another advantage, for certain negatives, lies in the fact that it does not solarize near so readily. If old paper must be used for negatives that have not this fault of excessive contrast, developing the prints by floating them, face down, on the developer, gives more brilliancy than would developing in the ordinary way. The best developer for stale paper is made by adding one ounce of a saturated solution of oxalic acid to ten ounces of old sepia developing bath, and using it at or a little more than one hundred and sixty degrees Fahrenheit. This method of development gives warm sepia colors on both fresh or stale papers. Printing flat negatives under blue glass causes an improvement, as does printing strong ones under green glass. Very hard and contrasty negatives should be printed under yellow glass and in strong sunlight. Prints from a negative of very strong contrast should be over-exposed and then passed quickly through a tray of tepid water and immediately into a hot bath developer. This treatment softens the results wonderfully, but gives the high lights a somewhat red appearance; the combination being particularly effective as treatment tending to give atmospheric results very suitable to some subjects.

THE SPECTROSCOPIC CAMERA.

We have just received from the makers, A. W. Penrose & Company, Limited, 109 Farringdon Road, London, E. C., a booklet describing their Spectroscopic Camera, a booklet having a novel cover in colors by the Rheinberg Process, a process given considerable space in the Process Year Book. There are a number of excellent reproductions of spectra obtained with the camera, pictures of the camera, full descriptive text, full information for taking spectrum negatives, and detailed prices, which last are remarkably low. The camera can be used for scaling any form of light, examining color-ray composition, the making of wedge spectra, determination of distribution of color sensitiveness of plates, transmission of colored media, investigating orthochromatic conditions, the study of three-color work; in fact, the camera is suited for quite exact scientific work. Any of our readers who are interested along this line will do well to send for a copy of the booklet. It will be sent gratis by Penrose & Company, whose address is given above.

WYNNE'S EXPOSURE METERS.

The new American agents, George Murphy, Incorporated, 59 East Ninth Street, New York, advise us that they have just received their first shipment of these well-known meters, that they have another shipment on the way, and will soon be in a position to fill all orders promptly. This is good news, as in the past it was not always possible to get one of these "little wonders" when wanted.

Club News and Notes

Club Secretaries and others will oblige by giving us reports for this Department.

OREGON CAMERA CLUB EXHIBITION.

One of those few, rare photographic exhibitions that are appreciated by layman and critic alike, was that of the Oregon Camera Club, held in Steinway Hall, Portland, Oregon, April eleventh to sixteenth, inclusive. It was their fifteenth annual exhibit, and all agreed that it was the most successful one thus far presented. One hundred and twenty-seven prints were exhibited; nearly every known printing medium, including carbon and gum-bichromate in monochrome and in colors, being represented.

Blue and red ribbon trophies were awarded as first and second prizes in portrait, landscape, marine, genre, animal, still life and flower study classes. William B. Dyer, of Hood River, Oregon, late of the East, a member of the Photo-Secession, an enthusiastic worker, and considered one of the foremost photographic critics of the country, kindly consented to judge the exhibits. The awards, together with Mr. Dyer's comments upon the selected pictures, were as follows:

Portrait class; first prize, The Artist, by Dan Ellery; second prize, Ynez, by Dan Ellery. These appeal to me as possessing most strongly the qualities of character, delineation, with good pose, lighting, and spacing. Landscape class; first prize, Still Waters (a pinhole), by Henry Berger, Jr.; second prize, Winter Moonlight, by Henry Berger, Jr. The first especially worthy owing to its marked simplicity, feeling, and delicacy of treatment. The latter is one of the most successful landscapes including sheep that I have ever seen. Still life class; first prize, Still Life, by Henry Berger, Jr.; second prize, "Played to a Finish," by H. J. Thorne. The first is especially strong in attractive lighting and breadth of treatment. Animal class; first prize, Contentment, by H. G. Myers; second prize, Tommy, by F. J. Rogers. The first a beautiful print with good spacing, the repetition of masses most satisfactory, and a strong portrayal of animal life. The other, a beautiful portrait of a dog, has more pictorial quality in its composition than its next nearest rival. Flower class; Elephant Leaf Begonia, by C. F. Richardson; second prize, Chrysanthemums, by H. J. Thorne. The first an example of very attracting lighting. Marine class; first prize, Asleep on the Deep, by Henry Berger, Jr.; second prize, The Breaker, by H. J. Thorne. The first a delightful work, broad in treatment and full of feeling. Genre class; first prize, Firelight Dreams, by Major T. W. Moore; second prize, Youthful Clam Digger, by C. F. Richardson.

The Judd Cup, awarded annually to the best collective exhibit, to Henry Berger, Jr. The pictures found especially attractive, aside from those to which awards were given, were as follows: Marine study, by Henry Berger, Jr.; Morning Mist, by Milton P. Goldsmith; Landscape, by Herbert Hussock; A Study—Head, by Major T. W. Moore; Landscape, by Albert G. Myers; two landscapes by J. V. Reid; Early Morning Reflections, Moonlight on a Peaceful Sea, Patiently Watching and Waiting, My Faithful Friend, and "Retired," all by C. Ford Richardson, and Landscape, by W. B. Struble.

Mr. Dyer, in closing, said: "I desire to thank the Oregon Camera Club and its members for the honor conferred. The judging of the prints has given me the greatest pleasure. I arrived at my decisions only after careful examination and comparison, and sincerely hope they may be at least reasonably satisfactory. The exhibition, as a whole, is most creditable, and I congratulate you on the high quality of the work."

It is to be regretted that neither James A. Haran nor H. G. Smith were exhibitors this year; but, with Henry Berger, Jr., an equal second in the Judd Cup competition, keen friendly rivalry is anticipated, in what

will likely be the final awarding of the cup, at next year's exhibit. The Club is one of the four American camera clubs represented at the last Dresden International Exhibition and the same pictures will be hung in the Hall of Honor at an International Exhibition to be held at Budapest next August.

"CAMERA WORK" NUMBER THIRTY.

I am afraid I have exhausted my stock of superlatives in trying to describe this handsome quarterly as each successive issue comes to hand. I trust everybody interested in photography has seen one of the issues, and those who have not at least had that pleasure have my deepest sympathy. Each issue is an education in itself and the last, the issue dated April, is an exceptionally strong one. It is illustrated with ten photogravures, reproductions of the work of Frank Eugene, all very fine and some of them his best known works. The text is of the usual high quality, the best being a discussion of the functions and limitations of art criticism, by William D. MacColl. The subscription price is six dollars and fifty cents a year. Address, Alfred Stieglitz, 1111 Madison Avenue, New York.

ANNOUNCEMENT.

Recognizing Photography as one of the mediums of expression in Art, the Buffalo Fine Arts Academy will hold an exhibition of Photography in the Albright Art Gallery in November, 1910. To ensure the best possible representation, the arrangements have been placed in the hands of that organization which has done the most to promote this particular branch of art, The Photo-Secession.

The exhibition will be of an international character, comprising, in addition to the work of America, some of the best prints that have been made in England, Austria, Germany, and France. It will be retrospective, but also representative of the latest work. Its distinguishing characteristic will be the Group System. Thus, in the first place, it will include the representation of a number of individual exhibitors, selected by the Photo-Secession; the work of each being shown in separate groups by means of the "alcove method" of hanging. Secondly, the aggregate of the prints from each of the foreign countries will be similarly displayed in separate groups. Thirdly, there will be a group-exhibit of the work of Americans who hitherto have not had the opportunity of being adequately represented in an important exhibition.

Those desirous of exhibiting in the last-named Open Section are requested to send their prints, unframed, express prepaid, to 291 Fifth Avenue, New York City, where they will be judged by the Photo-Secession. All prints for this class must be delivered to the above address before September tenth. The selection will be governed by the principle of Independent Vision and Quality of Rendering. To eliminate accidental successes, each exhibitor in this section must be represented by at least three examples. In the case of selected prints, the express charges will be refunded by the Albright Art Gallery, which also will defray the expense of returning them to their respective owners. Any further information that is desired may be obtained by addressing The Photo-Secession, at the address given above.

Cornelia B. Sage, Acting Director,
Buffalo Fine Arts Academy.

THE TRINIDAD CAMERA CLUB.

The fifth annual meeting of the Trinidad Camera Club of Trinidad, Colorado, was held at the club rooms May eleventh. The old officers were re-elected for the ensuing year: Walter Dearden, President; W. L. Crouch, Vice-President; and A. R. Allen, Secretary-Treasurer. The club starts the new year under the most favorable conditions, both financially and in point of interest of the members; usually having a full attendance at the monthly meeting. The number of members is limited and membership is at a premium.

The club has recently had the pleasure of seeing some fine lantern slides and albums from the Missouri Camera Club, the Photo Pictorialists of Racine, Wisconsin, and the Toledo Camera Club. One of the members, O. E. Aultman, has had some of his prints accepted and hung in the seventh Salon of the Toronto, Canada, Camera Club.

The Trinidad Camera Club will be pleased to exchange slides and prints with other camera clubs, the usual rule of exchange to govern. Address, A. R. Allen, Secretary Trinidad Camera Club, 383 W. Topeka Avenue, Trinidad, Colorado.

International Photographic Association

THE POST-CARD DIVISION.

Apparently a large number of our readers fail to realize the advantages offered by the Post-Card Division of the International Photographic Association. Many, no doubt, fear that they have not the time to print the necessary cards and attend to the exchanging of their work with other members. Yet, they would find that the time required was only a small addition to the time devoted to the printing of such pictures as they would ordinarily make. One often gets ready to make a few prints, and could easily go further and print two or three dozen post-cards the same evening. The cards that are received in exchange for these will be so instructive and gratifying that one will want to turn out many more of his own for the same purpose. Almost before it is realized, a collection will have been made that is highly prized; besides, the information gained by seeing the work of others will greatly increase the value of one's own work. An extract from a member's letter is here appended, just to show how enjoyable active membership in the Post-Card Division really is. In renewing his subscription, the member writes:

"I have found a great deal of valuable photographic information in 'Camera Craft,' and I want more. In addition, I have greatly enjoyed the privileges in connection with it, particularly the post-card exchange. I have received so many beautiful and interesting cards that it would be impossible to mention more than a few of them. Photographic post-cards from all parts of the world; real photographs, so much better than the finest printed half-tones in the best publications that there is no comparison. There are some fine ones taken by a real artist, from quaint and picturesque Holland. Some from England and Wales. Some of the strangest of far-off lands are represented; New Zealand, away on the opposite side of the globe. I have a great many from old and historic Mexico; among them, but far from being the most beautiful from there, is one of a not remarkable looking statue in front of a public building. But upon the back the sender has written a brief description, saying that it is a statue of Carlos the Fifth, that it is the largest piece of bronze ever cast, and that the man who accomplished the feat had his eyes put out to keep him from duplicating the work. But even with such a description, the subject is not so interesting to me as one sent from San Francisco, a picture of a bronze vase in front of the Golden Gate Museum. This vase is by Gustave Doré, and is called 'The Dream of the Vine.' The picture was taken with a fine lens, is clear and sharp, and I can look at it again and again without growing tired of it. One is only brought to a realization of the fact that it is only a photograph when conscious of a desire to walk around it and view the other side. Surely, to one who lacks the opportunity to travel about the world, this receiving of good photographs direct from the places pictured, must be the next best thing."

This member has the right idea, and we believe a few more of our subscribers would become equally enthusiastic if they would but enter the Association and become active in the Post-Card Division.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4950 Washington Ave., Chicago, Ill.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 200 S. Marion St., Denver, Colo.

Hy. C. Ferris, Director Post Card Division, 837 Acoma St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more of their average cards to the Director for approval. On the correspondence side of such cards should be placed the title, together with such data as hour, light, stop, plate, and exposure, if possible. If cards are of the requisite quality, the Director will authorize the placing of the letter "X" after the mem-

ber's number, indicating membership in the Post Card Division. A new notice will be given under the heading of "Renewals," if desired. Also ask for a new exchange notice when you renew your subscription. When writing the Director requesting reply, kindly enclose stamp. Address, Hy. C. Ferris, 837 Acoma St., Denver, Colo.

George E. Moulthrope, Director Lantern Slide Division, Bristol, Conn.

Edward F. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

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Vice-President—Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

CANADA.

Album Director—C. H. Foster, Kerwood, Ontario, Canada.

Secretary—J. A. Waddell, Kerwood, Ontario, Canada.

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French—Charles A. Wargny, 247 Torrence St., Punxsutawney, Pa., U. S. A.

German — George N. Baumiller, Nutwood, Ohio.

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Alaska—P. S. Hunt, Valdez.

California—Sigismund Blumann, 3159 Davis St., Fruitvale, Cal.

Colorado—O. E. Aultman, 106 E. Main St., Trinidad.

Connecticut—George E. Moulthrope, Bristol.

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Illinois—George A. Price, R. F. D. No. 1, Summit.

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Iowa—C. E. Moore, Eddyville.

Kansas—H. E. High, R. F. D. No. 1, Wilson.

Kentucky—Roy J. Sawyer, 1564 Greenup St., Covington.

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Massachusetts—John Mardon, 161 Summer St., Boston.

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Minnesota—Leonard A. Williams, St. Cloud.

Mississippi—Emory W. Ross, Institute Rural Station, Edwards.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32nd St., Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor St., Manchester.

New York—Louis R. Murray, 266 Ford St., Ogdensburg.

New Jersey—Burton H. Albee, 140 State St., Hackensack.

North Dakota—Jas. A. Van Kleeck, 619 Second Ave. North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

Oregon—Leonard S. Hopfield, Box 622, McMinnville.

Pennsylvania—William C. Barbour, Sayre.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Texas—Frank Reeves, Graham.

Utah—John C. Swenson, A. B., Provo.

Wisconsin—H. Oliver Bodine, Racine.

NEW MEMBERS.

2468—Rev. J. O. Glenn, New Scranton, Pa.
3¼x5½, for anything of interest. Class 1.

2469—Geo. F. Thielman, St. Cloud, Minn.
3¼x5½, on developing paper, of general subjects; for the same. Class 1.

2470—J. C. F. Harrington, 1158 West North St., Decatur, Ill.
Lantern slides of Argentine Republic and Bolivia, S. A.; for mountain, coast, waterfalls, and historical slides from all parts of the U. S., Canada, England, New Zealand, and Australia. Class 1.

2471—Anton Lee, Box 55, Deary, Ida.
Up to 8x10, developing paper, of studio work; for views and portraits. Class 1.

2472—Frank N. Weaver, R. F. D. No. 1, Junction City, Wis.
5x7 and smaller, developing paper, of views, homes, and home portraits; for post cards and prints. Class 1.

2473—Joe C. Montgomery, Route 1, Box 36, Edwards, Miss.
5x7, developing paper, of landscapes, genre, etc.; for figure studies especially. Other work acceptable. Class 1.

2474—E. Shanstrom, Box 916, Shanghai, China.
3¼x5½, developing paper, of landscapes, Chinese architecture, and native views; for portraits and prints, same size and smaller. Class 1.

2475—E. C. Kenney, Box 662, Perry, N. Y.
3¼x5½, developing paper, of views of Genesee River Valley near Perry, N. Y., for river, mountain or other country scenery, no city views. Class 1.

2476—H. P. New, Lebanon, Ind.
3½x7 stereo, developing paper, of landscapes, buildings, public gatherings; for the same in stereo. Class 1.

2477—Erick K. Eliason, R. F. D. No. 1, Artichoke Lake, Minn.
5x7 and smaller, also post cards, developing paper, of landscapes, flowers, etc., for post cards, mainly. Class 1.

2478—J. F. Horstman, Route No. 1, Box 52, Aptos, Cal.
Class 2.

2479—Mrs. Lois E. Gundelach, Huntington, Ore.
Class 2.

2480—Harry C. Jones, 309 W. Briggs, Fairfield, Iowa.
3¼x5½, post cards, and 4¼x6½, developing paper, of miscellaneous subjects and local views; for post cards or unmounted 4¼x6½ or smaller prints of interest. Class 1.

2481—Thomas J. Walker, Macabebe, Pampanga, P. I.
Class 3.

2482—John W. Kimball, Jr., R. F. D. No. 1, Sharon, Vt.
5x7, 4x5 and post cards, developing paper, of landscapes, scenery, rivers, lakes, mountains, country scenes, etc.; for like pictures from different parts of the country, also city views, parks, seascapes, and shipping scenes. Class 1.

2483—Oliver Frantz, R. F. D. No. 2, Platteville, Colo.
Class 2.

2484—John H. Vale, 609 E. 1st Ave., Denver, Colo.
5x7, printing-out and developing papers, of landscapes, historical, and geographical subjects; for subjects descriptive of the U. S. Class 1.

2485—Homer E. Nichols, New Milford, Conn.
5x7 and 4x5, developing paper, of landscapes, woodland and mountain scenery, high speed pictures, for any general pictures of interest, both of current events or as above. Class 1.

2486—Arthur P. Barnes, Box 468, Duluth, Minn.
Class 2.

2487—A. F. Shuler, 316 Fourth Ave., S., Minneapolis, Minn.
Up to 6½x8½ and stereos, developing and bromide papers, of a little of everything, mostly snapshots. Have a good bunch of European stereos taken with fast shutter; for stereos only. Class 1.

2488—Merritt Davis, Box 136, Salem, Or.
3¼x5½, developing paper, of flowers, animals, and scenes of all kinds on paper or post cards; for the same in post cards, only. Class 1.

2489—Chas. E. Lawson, General Delivery, Wheeling, W. Va.
4x5 and 5x7, also post cards, developing and printing-out papers, of landscapes and pictures of general interest; for child studies. Class 1.

2490—Fred J. Mitchell, Box 207, Port Stanley, Ont., Canada.
4x5 and any size smaller, developing paper, of scenery, landscapes, views along the lake shore, and anything of interest; for the same or anything of interest in prints or post cards. Class 1.

2491—F. J. Myers, Kendallville, Ind.
Class 3.

2492—J. T. Miller, R. F. D. No. 1, Murat, Va.
8x10 and smaller, developing paper, of views, portraits, and stereoscopic views; for the same. Class 1.

2493—R. Everett Jenne, Box 40, Couperville, Wash.
Class 2.

2494—M. A. Wells, M. D., 874 Brandiss Blvd., Omaha, Neb.
Class 2.

2495—B. J. Kuhn, 2207 Maple St., Omaha, Neb.
Class 2.

2496—L. C. Sholes, 111 Board of Trade, Omaha, Neb.
Class 2.

2497—H. M. Gregerson, Box 175, Omaha, Neb.
Class 2.

2498—Dr. B. B. Sprout, 516 West 4th St., Williamsport, Pa.
Class 2.

2499—Andrew Schoeppler, 407 Dubois St., Detroit, Mich.
Post cards, only. Class 1.

RENEWALS.

276—I. N. Morrill, 2509 Pierce St., N. E., Minneapolis, Minn.
Post cards, developing paper, of miscellaneous subjects. Do only first-class work and do not wish to receive anything else. Am pretty busy and might not always be prompt in exchanging. Class 1.

403—Lou P. Tillotson, 1305 S. 32d St., Omaha, Neb.
Class 2.

1132—Leonard A. Williams, State Normal School, St. Cloud, Minn.
No. 2 Brownie, 3A Kodak and 8x10, developing paper, of landscapes, genre, and figure studies; for the same and pictures of manual art and Arts and Crafts workrooms. Class 1.

1161—R. Allan Phillips, Montreal, Que., Can.
Class 3.

1172—R. Weaser, R. F. D. No. 1, Chenango Forks, N. Y.
Regular 5x7 stereos, of Watkins Glen, Seneca Lake, river, cliff, and mountain scenery; for unmounted stereos, of natural scenery from all parts of the world. Only good work sent and received. Class 1 for stereos, Class 2 for single prints and post cards.

1350—Fritz Lehmann, 141 Kant Str., Berlin-Charlottenberg, Germany.
4x5, developing paper, of pictures of general interest, especially army and navy, and landscapes. Class 1.

1629—J. H. Cardwill, 304 S. 16th St., Omaha, Neb.
Class 3.

1728—E. H. Wilson, 304 S. 16th St., Omaha, Neb.
Class 2.

1731—E. C. Huntington, Windom, Minn.
5x7 and smaller, all papers, of subjects of general interest; for the same. Class 1.

1758—C. E. Moore, R. F. D. No. 2, Eddyville, Iowa.
5x7, 4x5, and 3¼x5½, developing paper, of mine, farm, and mountain views; for anything of general interest in post cards only. Class 1.

1862X—Paul M. Breidert, 316 S. Summit St., Kendallville, Ind.
Class 2.

1868—Miles Greenwood, 84 Cottage St., Melrose, Mass.
Class 2.

1928—De Lancy Cossett, R. F. D. No. 1, Box 44, Wilmington, Ill.
4x5 and post cards, developing paper, of landscapes, river scenery, camp life and street scenes; for like subjects or anything of interest. Class 1.

1980—Ansel Kisner, Catawba, W. Va.
Class 2.

2059X—Don Campbell, Box 23, Hilts, Cal.
3¼x5½, developing paper, of landscape and general views; for anything interesting in landscapes, city views or children's pictures in post cards, only. Class 1.

2093—Carl A. Rinard, 221 W. Eaton Ave., Cripple Creek, Colo.
3¼x5½, developing paper, of Colorado views; for anything of interest in prints or post cards, prints preferred. Class 1.

2274—E. J. Towne, South Dayton, N. Y.
Post cards of landscapes and interesting views. Class 1.

2275X—Miss Ethel L. Matlack, Grand Junction, Colo.
Desires to change from Class 1 to Class 2.

2328—W. H. Boyer, R. F. D. No. 7, Gallatin, Mo.
Post cards of general views; for the same. Class 1.

2333—John Neff, Jr., Box 212, Hamburg, Iowa.
3¼x4¼ up to 6½x8½, developing and printing-out papers, of landscapes, river views, and the like; for the same. Class 1.
(Name was incorrectly spelled "Heff" in the March number.)

CHANGES OF ADDRESS.

170—Thos. J. Ronald, Brunker, Colo.
(Was Orient, Iowa.)

1866—Walter M. Duve, 232 Clark St., Kendallville, Ind.
(Was 652 E. Dowling St.)

1892X—Wm. H. Congdon, Blunt, S. Dak.
(Was San Diego, Cal.)
Reports having a nice collection of historical views from Southern California, also some good marine views, post cards only. Class 1.

2115—Paul Suter, R. F. D., Route 3, Youngstown, Ohio.
(Was 1801 E. 35th St., Cleveland, Ohio.)

2140X—Cleo L. Bowerize, Cottage St., Ashland, Ohio.
(Was Greenwich, Ohio.)

2152—Herbert M. Poellot, 359 Edmond St., Pittsburg, Pa.
(Was 350 42nd St.)

2163—A. R. Cumberland, care Robinson Gavan, Sacramento, Cal.
(Was 1710 T St.)

2402—F. C. Hollopeter, 1121 E. 6th St., Fremont, Neb.
(Was Kendallville, Ind.)

WITHDRAWALS.

1896X—Roy J. Sawyer, 1564 Greenup St., Covington, Ky.
Withdraws from exchanging, will still act as secretary.

2085—J. B. Leonard, 687½ Hoyt St., Portland, Ore.
Withdraws on account of lack of time.

2352X—K. L. Stegner, R. F. D. No. 1, Payette, Ida.
Is changing his residence and will be unable to receive mail for a few weeks.

TO "CAMERA CRAFT" READERS.

We desire to apologize to the many amateurs who have so generously responded to our advertisement in regard to the new formulae book. In getting out this book we have met with a great many delays from various sources, but wish to say that it is now in such shape that we have every assurance that it will be in our hands by the fifteenth of this month. Thanking you for your kind indulgence, we remain,

BERLIN ANILINE WORKS,
213-215 Water St., New York.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

SEND FOR IT, SURE.

The Southern Pacific has just issued a handsome book of ninety-six pages and cover, in colors, entitled, "California for the Settler." Every alternate page is a reproduction of a fine photograph of a California scene, and if you want to know of the beauties of rural California, this book will give you the information. Orchards, in bloom and in bearing, cattle grazing, vineyards, fruit drying, hay fields, berry fields, river scenes, oil regions, subjects too numerous to mention. Simply send for it. We are advised that it will be sent free to readers of our magazine if they will make written application to the Advertising Department, Southern Pacific Company, Flood Building, San Francisco, California.

FILM DEVELOPING APPARATUS.

We have recently gone over specifications of letters patent issued to A. P. Center, an old subscriber of ours at Long Beach, California. The device is extremely simple and effective, allowing of the perfect development of any assorted sizes and lengths of film in an enclosing tank, each film being held straight and free from contact with its neighbors, while the insertion of the film and the adjustment of the retaining clips are easily and quickly made. Mr. Center is desirous of disposing of the patent and we would advise anyone who is in a position to make and market such a desirable utility to communicate with him at the address given above.

A RECORD CLASS.

In a recent letter, President Lively of the Southern School of Photography, advises that he is more than pleased with the prospects for a large attendance this summer. The school opened this year with a larger and better class than ever before in the history of the institution, and the pupils are making a most rapid and gratifying progress. In addition, a large number of prospective students are coming later. President Lively can make the finest of pictures, as is attested by the many medals and awards that he has captured; but he is a born teacher and would rather teach others how to make the best work than run the risk of getting into the millionaire class by making them himself at so much per dozen. If you want thorough instruction or wish to round out your knowledge of professional photography, write to the Southern School of Photography, McMinnville, Tennessee.

LOCAL VIEW CARDS.

The local view card is the card that never goes out of style. Other cards have their day and are forgotten, but the local view is the backbone of the business; in fact, the cause of the business. The National Colortype Company of Cincinnati, Ohio, is turning out better cards every year and increasing their output as fast as they can install suitable machinery. They can now deliver their high-grade, hand-colored card in two to three weeks. Ask them for samples; they will gladly send them if you mention "Camera Craft."

MR. JARRELL GOES TO OTTAWA.

J. O. Jarrell, for the past six years in the employ of the Bausch & Lomb Optical Co., has associated himself in business with The Topley Co., of Ottawa, Canada. Mr. Jarrell has many friends in the photographic trade who will join with us in wishing him success in his new field of work. He takes with him the good-will of his associates, who, while deploring his departure, are glad for the larger opportunities which are before him in Canada, where he will continue to exploit the Bausch & Lomb products.

THE NEW GRAFLEX CATALOGUE.

Like all its predecessors, it is a beauty. Everybody interested in the possibilities of focal plane shutter work should send for one of these if their dealer cannot supply it. It contains fifty-two pages and a large number of reproductions of surprisingly fine photographs made with Gra-

flex and Circut cameras. The only regret is that we are not given the names of

the makers of such fine high-speed work. Graflex cameras of course come in for a thorough description, and rightly so, because the pictures at once cause the reader to wish to know something about the fine equipment which has made them possible. The book is issued, and mailed on request, by Folmer & Schwing Division, Eastman Kodak Company, Rochester, New York.

THE NEW ANSCO CATALOGUE.

The Ansco Company have just issued a new catalogue of their well-known line of goods for the amateur trade. To say that it is an exceptionally fine catalogue particularly full and complete, is hardly doing it justice. But why go into details in describing its many good qualities? It will be sent free on request to all of the "Camera Craft" readers and we believe these readers of ours are entirely too keen to neglect the opportunity of getting such a handsome list of photographic goods by merely sending in a request. Ask your dealer for one; and, if he cannot supply you with a copy of this new, 1910 catalogue, write directly to the firm: Ansco Company, Binghamton, New York.

EDGEWATER BACKGROUNDS.

We are in receipt of a new catalogue of the Edgewater series of grounds, painted at the Riverside Studio. These are of the same high quality as the Riverside grounds, the only difference being that the designs are not so elaborate. The Riverside products have earned for themselves a very high position on account of the atmosphere, tone, and photographic quality which they possess. It is not a hard matter to paint a background design upon muslin, but the production of a ground at the Riverside studios means that it is painted, photographed, repainted and rephotographed until the painter-photographer secures that quality which has made these grounds famous. If you will write the firm, they will gladly send you a catalogue showing their many choice designs. If you will use one of their grounds, you will insist upon having the same productions in the future. Address, Chicago Photo Scenic Company, 140 Dearborn Street, Chicago, Illinois.

ROSS LENSES.

The Homocentric Series in their different speeds now offer to photographers all the range that can be desired: f-5.6, f-6.3, f-6.8 and f-8. The process photographer, for line, half-tone and three-color work cannot reach a better lens than the Ross Homocentric Process Lens, f-8, with Iris diaphragm and with slit for odd sizes and shapes of stops, as desired. The studio photographer, who has the Ross Studio Lens, has one with definition, gradation and speed. The Ross Studio Lens most in use for cabinet portraits is the No. 3 twelve-inch equivalent focus, three and one-half inches in diameter, working at a little more than f-3. Write to the American agents, George Murphy, Incorporated, 59 East Ninth Street, New York, for further particulars.

THE ILLINOIS COLLEGE OF PHOTOGRAPHY.

The Government of Guatemala, through its Consul at New Orleans, has just placed a student, Georges Saenz, with the Bissell Colleges for a complete course in plain engraving and three-color work. On completing the course, he will take charge of a bureau of engraving for his home government. Mr. Manzanilla of 1908, who was sent to learn the engraving work by the Mexican Government, has charge of a similar department in Yucatan.

Clarence Weed, demonstrator for the Eastman Kodak Company, spent a day at the college last month demonstrating his company's products.

ODE TO A COOKE LENS.

Cans't tell me why, old lens with glasses bright,
I yielded to insidious pretenses
Of others of thy race? For though such lenses
Full covered every inch of my emulsion,
Yet fool was I to compass thy expulsion,
And send thee to the distant "ewigkeit."
Ah, Taylor, Taylor! It was *not* the voice
Of Hobson's choice.

Ah, for a space, 'tis true, the glass of Jena
Around me wove its mystic, potent spell,
Which led me on to barterings—to sell
Thy trusty form to unknown, alien hands;
And, lo, thou wentest forth to far-off lands,
And left me but to sing a plaintive *scena,*
Lamenting my sad loss; ah, think of that,
Anastigmat!

But now again my willing fingers close
Around thine unpretentious "Unicum";
Again I gaze in admiration dumb
Upon thy shining, highly lacquered hood.
My joy, I ween, can well be understood,
And who will grudge the thought that paltry prose
Is quite inadequate to tell my glee
On meeting thee?

Full lovingly I work thine apparatus;
Once more thy shutter gives its "time"—its "½,"
Its "1/10th," and all the others; how I laugh
As once again I bid its noiseless blades
To open; then to close. Great joy pervades
(Accounting for this glad "divine afflatus"),
For naught in matters optical surpasses
Thy "simple glasses."

I wonder, as the weary years have flown,
What journeys thy successive owners took
(To emulate thy namesake, Captain "Cooke"?)
What pictures, old objective, hast thou made
In cloistered close, in green and grassy glade,
Since other flanges claimed thee from thine own?
Enough! With tender care, no more to roam,
I screw thee home.
Now, after stress of numberless exchanges,
To thee once more I gratefully return,
And others, by my song, may haply learn
That first attempts at purchasing one's kit
Are sometimes really right; think over it.
For he who 'mongst his friends a "deal" arranges,
May find, too late, that 'spite of eager quest,
First love is best!

THE NEW PREMO CATALOGUE.

Do not fail to secure a copy of this elegant new catalogue. Your dealer will have them by the time this reaches you, but if not, or if he is out of them, write directly to the Rochester Optical Division, Eastman Kodak Company, Rochester, New York, and ask for a copy. It is a book that will delight every user of a camera; in fact, would delight anybody interested in pictures, and that includes about everybody. All the new Premo goods are listed and explained, together with the improvements in the regular lines. The pictures used as illustrations are some of the best reproductions it has ever been our good fortune to enjoy, and we can assure our readers that they are missing a treat until they have secured a copy.

A NEW "TIPSTER."

The Defender Photo Supply Company, of Rochester, New York, have just issued the fifth edition of their instruction book, "The Tipster." This little volume is a complete handbook on the subject of Defender products and their manipulation, and we advise everyone who is interested in photography to send for a copy, which will be furnished free on application. The booklet is got up in very neat form, is attractively illustrated; and the instructions which it contains are very complete and comprehensive.

THE IMPERIAL NON-FILTER PLATES.

The Imperial Non-Filter Plates have all the wonderful latitude and gradation of the popular Imperial S. S. brand, with the added feature of high orthochromatic quality, being specially sensitive to green and yellow. Many photographers are using them for their general commercial work, particularly copies of paintings and such work as requires good rendition of color values. Their wonderful latitude, combined with their superior orthochromatic

qualities and their not requiring a ray filter, makes them very desirable for such work. In addition, they are instantaneous, having a speed of 225, H. & D. They are imported and stocked by the United States agent, G. Gennert, New York and Chicago. Do not fail to write the firm for a circular.

A BOOK OF VALUABLE INFORMATION.

G. Gennert writes us that they have just received a supply of the "Imperial Handbooks," the book that has received so much favorable comment from the photographic press of England. In addition to the enormous amount of valuable information concerning the handling and use of Imperial plates, there is a tissue insert showing the exact appearance of a negative at nine different stages, corresponding to varying times of exposure and development. The firm wishes to place one of these books in the hands of every interested amateur and professional photographer in this country. Ask for the Imperial Handbook, and address, G. Gennert, 24 and 26 East Thirteenth Street, New York.

NOTICE OF REMOVAL.

Burroughs Wellcome & Company announce that owing to the extension of the firm's business, it has been found necessary to remove the New York Offices and Exhibition Room to 35, 37 & 39, West Thirty-third Street, near Fifth Avenue, New York City.

HIGHEST PRICE FOR A COLORED PHOTOGRAPH.

The highest price ever paid in America for a photograph at public auction—nine hundred dollars—was paid by a New York collector on March twenty-fourth for a dingy little colored photograph dated 1828, showing Wall Street at the corner of Broadway.

THE EURYNAR LENS.

The Double Anastigmat "Eurynar" is a high grade, high speed, anastigmat manufactured by the Rodenstock Optical Works, at Munich, Germany; an institution reputed for its standard, high grade, optical goods. The Anastigmat "Eurynar" enjoys a large sale in all foreign countries, including Germany, England, Belgium, France, Italy, Austria, Spain and Russia. The Rodenstock Optical Works have agencies in the countries named, and are represented in America by Messrs. James Frank & Son of Augusta, Georgia, who report a rapidly increasing demand of the "Eurynar" in this country. The Anastigmat "Eurynar" is of German manufacture, imported, and is an objective well worth investigating by those desiring an efficient anastigmat at most attractive prices.

FADING PRINTS.

One of our amateur friends recently complained of the impossibility of having his developing and printing done by finishing houses and at the same time being assured of absolute permanence in the prints obtained. This detail of permanency is one that has received too little attention in the production of prints for the amateur photographer, and particularly so in the smaller shops where developing and printing is carried on in conjunction with some other line of business; and, permanency is of the utmost importance in the upbuilding and holding of this class of trade. Many prints turned out last season have commenced to fade and spot already, with the result that the amateur is anxious to place his orders for developing and printing with a house that can guarantee satisfaction in this particular.

Imagine your own feelings after paying good prices for the developing and printing of your vacation pictures, to find that before you are ready to make another trip to the country or seaside the prints have faded or spotted, making them valueless as either pictures or mementos. Would you have more work done by the same people? No. You would try to find some specialist who could do the work properly and at the same time guarantee the permanency of the prints produced. Such a firm is the Photo Craft Shop, of San Francisco. After exhaustive study and experiment along these lines, experimenting extending over a period of several years, they are not only prepared to get the best results from your films and plates, but will guarantee their prints to be absolutely permanent. This guarantee is unconditional. Whether you are an amateur, dealer or professional photographer, it will pay you to write for full particulars.

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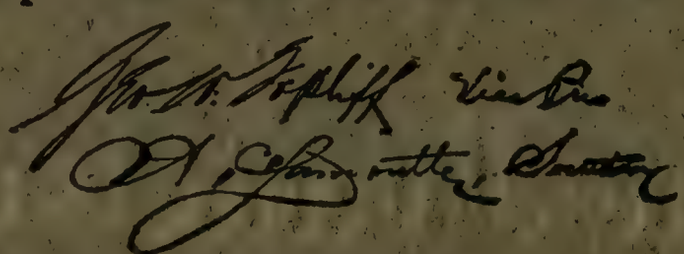

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Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, JULY, 1910. No. 7

Color Photography on Paper as a Commercial Proposition

By Henry J. Comley, F. R. P. S., Hon. Sec. of the Society of Color Photographers

Our frontispiece this month is a reproduction; rather, an attempt at reproducing one of Mr. Comley's examples of color photography. As explained in a note at the head of an article by the same author in our May issue, the original has won prizes in several exhibitions devoted to color photography and is conceded to be the best example so far produced. It must be understood that the reproduction fails entirely in giving the soft, almost glowing, quality of the original. We must also offer our apologies for the wrong spelling of Mr. Comley's name in our May issue, an error all the more regrettable on account of its being inexcusable in this case, the name being so well known. While Mr. Comley has not the time to consider correspondence from those only superficially interested in the subject, he has intimated that he would like to see color photography taken up by a few professional photographers of standing, in this country; and any of our readers may advise us if they are so interested and we will use our best efforts to either secure further details from him or put them in touch with Mr. Comley direct. Mr. Comley is himself a busy professional portrait photographer. We would have reproduced one of his color portraits, but the half-tone process, with its superimposing of printer's inks, does not lend itself to the reproduction of delicate gradations in flesh tints.

Color photography on a paper base can be made a source of considerable profit even in its present stage of development, and those who take the matter up intelligently now will be the men who will establish themselves as the experts of the future when the general demand for this class of photograph comes along, as it inevitably will; though I believe the demand must be created and encouraged by the photographer himself. I certainly feel that professionals are neglecting a highly lucrative section of their business in not bringing this work forward, and that their apathy is a bar to progress in this direction.

It may be argued that the color studio opened in London a few years ago turned out a failure; but good reasons can be assigned for that unfortunate result. It was certainly not color photography which was at fault. Speaking personally, the writer makes color photography pay, and has been doing so for several years; so there is no earthly reason why others should not do the same. Successful results are not easy to obtain in any process of color work on paper, neither can prints be produced with anything like the facility that is possible with the ordinary monochrome processes; but is not this a good reason why it should be exploited today rather than wait until

a simplified process may be invented; a very remote contingency; and when it does come, the merest tyro with little or no experience may immediately enter into competition with us in the work.

Here is the opportunity for doing good business at high prices, business which can be done right alongside of your ordinary studio work without seriously interfering with present arrangements, and the first color-picture order you deliver will be the best advertisement your gallery ever had.

The first consideration is the necessary special apparatus. Three-color work can be quite well done with an ordinary camera and plate-holders, particularly such work as copying paintings, also for landscape and still-life studies; but for portraiture or any serious work in this direction a special repeating back should be adapted to a suitable rigid form of camera, with one plate-holder to carry three plates side by side, and a frame to take the three-color light filters. This form of camera-back is put on the market by Sanger Shepherd, Ltd., of London, but it can readily be made locally by any good cabinet maker.

For portraiture a modern quick-acting lens of large working aperture is indispensable in order that the combined exposure shall be as short as possible. With these requisites, together with panchromatic plates such as "Wrattens," three-exposure portraits can be made in the studio in ten to twelve seconds, and in four to seven seconds out in the open.

Cameras have been devised, and are obtainable, in which the three plates are exposed simultaneously. Theoretically, this form of apparatus should fill the entire requirements of the color worker, but unfortunately, there are drawbacks to its use. The most serious of these is that a set of light filters cannot be made which will automatically adapt themselves to various conditions of the light, even of one day, much less of a year. Light is a phenomenon exhibiting infinite variety, so that an all-embracing set of three absorption filters cannot be made which will work with present-day dry-plates for a fixed ratio of exposure. For instance, the mid-day light in spring and summer is highly charged with blue rays; as the day advances, the blue gives way to rays which are orange and increasingly red towards sunset. In the autumn and winter, particularly in England, the morning light is often more or less yellow, and there are always more orange rays throughout the day than there are in the summer light. Therefore, in order to work successfully under these varying conditions, at least three cameras of this one-exposure variety would be necessary, the light filters of each being prepared with different scales of absorption. A further objection is that one of the negatives is reversed as regards right and left, so that a copy negative must be made from it, with natural loss of quality. As an alternative, the plate may be reversed in the plate-holder, but this involves difficulty in making the set of negatives of equal ratio as color records, and often spells failure in the resulting print. But, in spite of these objections to a one-exposure form of apparatus, several members of the Society of Color Photographers are using them with a fair amount of success. The one outstanding advantage given by these cameras is that a slight movement of a figure or foliage is recorded upon all three plates, and the resulting print

would indicate the movement merely by a softening of line; while the chief objection to the three-exposure method is that even a slight movement during exposure is recorded in different positions on each plate, necessitating considerable skillful retouching to correct it. Personally, I adhere to the three-exposure type of camera, as I find it fulfills all my requirements; and I would advise a beginner in color work to go along the same lines, as there is more control of the work, much less being left to chance and good luck; and, furthermore, the initial cash outlay would be considerably less.

The choice of a printing process for three-color work is a matter which will be regulated by the requirements of the worker or the demands of the work in hand I will therefore outline the various paper processes employed by members of the Society of Color Photographers. They may be enumer-

READING TO GRANDMA. By NICK BRUEHL

ated as follows: Superimposed carbon tissue, carbon stripping film (rotary process), pinatype, Sanger Shepherd imbibition process, tri-color gum, bichromated size. More or less successful work in all these processes is circulated in the portfolios of the society; so that it will be seen that any of these processes, carefully experimented with, is capable of giving a passable result. My own experience has practically covered the whole field of action, as I have dabbled in all the foregoing methods, but have only given exhaustive attention to the carbon stripping film and pinatype processes, which are at present the two methods most suitable for professional work. I am informed that a new carbon tissue for tri-color work is about to be put on sale, which is expected to be more satisfactory to work with than the tissue

now obtainable, and may supplant the stripping film method; but I have no definite information to offer on this point at present.

The carbon tissue now available gives good results with specially suitable negatives; these should be fully developed and full of detail, but thin and soft for the yellow and blue printers, and slightly more contrasty for the red. This quality negative is not strong enough for either the stripping film or pinatype methods, the latter requiring very plucky negatives in order to give crisp and clear results. One is therefore able to adopt the printing process most suited to the gradation of the negatives in hand. Apart from the foregoing consideration, these three processes have individual peculiarities, advantages, and faults, which I will briefly detail.

Carbon tissue, after printing, must be temporarily transferred to a transparent base, either glass or celluloid, for development, in order that the several prints may be superimposed, at intervals as required, until the balance of color is satisfactory. When using glass for this purpose, it should be specially thin, or great difficulty will be experienced owing to the thickness of the glass separating the component parts of the picture and preventing registration. If celluloid is employed, there is a tendency for the film to frill up at the edges and break away, unless great care is exercised. If the negatives employed with this material are not soft and delicate in gradation so that very brief printing is necessary, the resulting prints are inclined to be "fat" and heavy, thick with pigment in the shadows, the blue print being particularly troublesome owing to the tendency which it has to print through very quickly.

With carbon stripping film (rotary), this disadvantage is not so serious, as methods can be employed to avoid it. These films do not require to be transferred before development; they are easy to assemble for judgment during development and have no tendency to frill or break away at the edges unless subjected to very rough treatment. They are not faultless, however. They cannot be manipulated in excessively hot water or they will "kink" and be irretrievably ruined. If kept in stock for more than a few weeks, particularly in the summertime, or if stored in a warm room, the edges of the films will dry up and contract; consequently there is a buckling of the whole surface which makes it impossible for the film to be pressed into perfect contact with the negative; it is then necessary to cut the film down for smaller sized pictures, by a generous trimming of the edges all around. The results obtained by the stripping film process are softer and more delicate than those made with carbon tissue; and, though the first cost of the material is higher, the percentage of waste is lower and the process is perhaps easier to work, so that the extra cost of material is fully compensated for.

Pinatype is briefly a transfer imbibition process, the prints being made upon a gelatine-coated paper which is brought into contact with a dyed-up print-plate from which it automatically takes up the dye forming the picture.

The beginner will find difficulties in the first stages of this process which can only be overcome by repeated trial and failure. First, a set of transparencies must be made from the three-color record negatives; these

THE BOOK SAYS SO. By NICK BRUEHL

must be of a peculiar quality as regards gradation, and are most suitable when made upon special transparency plates rather than the ordinary variety. From these transparencies a set of three print-plates is made upon plain gelatine-coated plates which have been sensitized with bichromate salts. The quality of the tri-color picture largely depends upon the correct exposure of these print-plates to daylight under the transparencies.

One great advantage of this process is that the worker is quite independent of daylight for printing his pictures, and, after the preparation of the print-plates, the labor involved is very small compared with tri-color carbon printing.

Experience and constant practice are necessary in order to correctly time the dye-printing and to register the succeeding prints quickly and surely; but it is work which can soon be mastered, and the results are most gratifying and pleasing.

There is no doubt, however, that both for best work and for small quantities the carbon process stands alone as a process for professionals, as the results are unequaled by any other process. A further advantage is that negatives may be made during the morning and, in cases of emergency, a wet print in color shown the same day; though it cannot be delivered under three days, because the print must be allowed to dry spontaneously between each successive transfer.

When larger quantities of prints are required, say 50 to 100 copies, and it is not essential that they shall be uniform in quality, then the pinatype process is almost essential, as the small cost of the production of successive prints enables one to fill orders for commercial purposes in competition with lithography and three-color half-tones.

The Sanger Shepherd process is virtually a form of stripping transfer pinatype in which gelatine-coated celluloid films are sensitized with bichromate, exposed and developed, and then dyed up to the required strength of colors, afterwards being transferred by superimposition on to paper. This process is commendable for the making of brilliant tri-color prints from enlarged negatives, for which purpose it is perhaps the best process we have; a certain amount of control is possible in the dyeing up, and effects can be obtained to suit the requirements of the subject or the wishes of the operator. Some of the finest enlargements I have seen were made by this process. On the other hand, none but those possessing a good eye for color could hope to make even passable prints by this method, because so much depends upon the ability of the worker and his judgment for correct color rendering.

I am aware that this latter remark may be applied to any process of color work on paper, but more particularly to the dyeing-up processes and those in which the operator has control of the color matter employed. Among the latter are the tri-color gum and bichromated size methods; the former being an adaptation of our old friend bi-gum and the latter a near relative, seeing that it is little more than a substitution of gelatine size for gum arabic; water-color pigments being used in each case. The modus operandi of these two processes differs slightly, but the comparative results are quite distinct. For broad, sketchy, impressionistic results in landscape and sea pictures, nothing can equal the size process; in fact, no sharpness of detail can be obtained and the picture must be viewed from a distance of several feet in order to appreciate it; the effect is then very much like that of a delicate water-color drawing, and is very pleasing. This process is not of much use for pictures under 8x10 in size.

Tri-color gum is, of course, suitable for quite small work as well as for enlargements, the detail being more defined. This process is suitable both for landscape and large figure studies, and for these purposes has received the attention of several of our leading pictorial workers. Color photographers who wish to make pictures which do not look like photographs at all should not neglect these two last mentioned processes.

I must not close without a word upon certain modifications of the foregoing processes which I have found possible and advantageous. Pinatype and carbon work well in combination with each other, as also do pinatype and the Sanger Shepherd process, and pinatype and gum. For example, frequently when making tri-color copies from old paintings I have found my carbon prints a little too bright and contrasty, but the substitution of a pinatype blue print for the carbon one has given the effect desired. A blue pinatype is also useful as a base print for either a Sanger Shepherd or a gum picture; in fact, for the latter it is par excellence; but, in either case, a gelatine-coated paper must be employed for the picture.

The work of the great artist is to find in all that appears most trifling or contemptible fresh evidence of the constant appearing of divine power for glory, for beauty, and to translate it and proclaim it for the unthinking and regardless.—Ruskin.

What My Camera Has Done

By G. C. Flegel, I. P. A. 1718

Illustrated by the Author

THE TREE BY THE WAYSIDE.

TITLES must be short. Do not imagine, gentle reader, that I shall take the one used above as an excuse to inflict upon you a list of my own achievements as an expert photographer. My camera has been a great source of pleasure and satisfaction to me without having produced anything that could be called artistic; and I have felt indebted to it for a large amount of enjoyment and profit without in the least crediting any part of either to my artistic appreciation or the artistic quality of the results. Just why some writers on the subject should use the term, "merely a record," as if it conveyed the idea of all that was undesirable in a photograph, I cannot see. I have aimed to make "records" only, and in making them have found pleasure, and pleasure entirely free from any regret that the artistic element was often entirely absent.

Some three or four years ago I bought a camera, mainly because it was cheap, but partially for the reason that it appeared to me, from what the seller had to say, that about all I had to do was to sling the box over my shoulder when I started out and return home with a collection of plates from which I could print any number of as up-to-date pictures as it was possible to get. And I did get them. Gee! what a lot they were; in fact, I had everything from an under-exposed negative that was almost clear glass to one that was so badly over-exposed that I could not see daylight through it. I had everything from a plate that had not been exposed to one that seemed as if I had tried to make the most composite ever; in fact, I had four exposures on that plate, ranging from a single figure to a landscape. As I was not entirely broke, either in spirit or financially, I tried again. It is my disposition to go after a thing more than once if I don't happen to get

it the first time; so I made another try at it a short time after the first effort; and, on my return, had a few negatives from which I could print pictures.

These two experiences convinced me of two things: first, that there was considerably more in it than going out in the country and pressing the button; and, second, that I would be considerably older than I am at this writing, even, before I became the possessor of a print of my own production that would elicit favorable comment by my friends, if I depended entirely upon my own efforts. I therefore made it a practice to read everything photographic that seemed of a practical nature, particularly such articles as appealed to the amateur. It was not long before I found myself deriving great benefit from my reading, so I subscribed for the best photographic magazines, and have continued to find them worth many times their cost. At the end of a year I found the camera had done little more for me than point out a way in which I could blow in all the spare cash I had, and in some instances cash that I could not so very well spare. During this period, the maxim, "Experience is a dear teacher," was brought most forcibly to my mind a number of times.

ON THE SANDUSKY RIVER. WHEN FROST IS KING.

After trying nearly every developer that was compounded by formula given in the magazines and books, some of which, to my mind, were never intended to be compounded at all, formula or no formula, I decided that there were a lot of people writing on the subject just simply for the love of writing something. I discarded them all and started in to use only one developer, one that had given me some good results, and I have continued to stick to that old reliable closer than a tick to a dog's back. I am still getting results; but I never could tell just when to stop development; that was my weakness. I always seemed to over or under develop; not so awful much, but just enough to make printing a good deal of a trial. Just to get away from this defect, I bought a tank; and that fixed things exactly. Say, fellows, the tank is surely the correct thing, no more uncertainty; and, if a plate is a little over or under timed, I get all there is in it without any guesswork. And that was where this camera of mine commenced to do things for me.

Looking back over my experience, I can see that my camera has done a great deal for me in many ways. In a financial way it has repaid the

original investment in full, besides having paid the expenses of many of my pleasure trips. That alone is no small item when it is remembered that I do not follow photography as a means of gain. The camera's productions have been the best possible chronological register of events, such as I could have had under no other conditions. Looking over the prints, I find, from their dates, the dates of storms, special happenings, social gatherings, and things of that kind; the pictures themselves being practically an account of the most interesting of the happenings in my small world, my vacations to various parts of the country. In fact, my camera has provided me with indelible records of many pleasurable events during the past few years. The prints reproduced herewith are from negatives that I would not part with for a good deal more than they are worth to any one except myself. They certainly are not great productions, from an artistic point of view; yet they suit me, and suit me exactly. They tell me true stories, vivid stories, complete stories; stories of sunshine and pleasures, stories of storms and hardships.

IN THE PARK. SEPTEMBER.

And I am not going to try to tell their stories for them; it is unnecessary; they can tell them much better themselves. From the Cascades of Oregon to the rivers of Ohio, there is a story in each. My camera has given me these in a form to which I can turn as the spirit moves; and, as I turn the pages of my album, I revisit the scenes, enjoy again the pleasures, once again conquer the buffeting of the storm. Could I gain a fractional part of this enjoyment by an endless striving to measure the results of my puny capabilities as an artist against the work of the masters of artistic photography?

And more, my camera has brought me nearer to nature than I ever expected to get; it has taught me to see the beauty in that which I have hitherto passed by without notice; it has taught me that there were other things in life besides the daily grind; in fact, it has made that same daily grind less objectionable by the diversion which it introduced. It is a recreation, a re-creation, for me, at least, to take a few hours with my camera, away into the country. Be it hill, marsh, field, or woodland, from every point I can find something to attract, something to admire. The flowers, the waving grain, the gentle sweep of the valley, the rugged sternness of

THE MILL RACE.

the mountain, the purling brook, the dashing torrent,—all have their charm; and my camera records it all for me.

I am quite sure that my good friend, my camera, will never make enough of an artist out of me to secure my co-operation in the production of the "fuzzy artistic" kind, such as are affected by some who occupy high positions in the photographic world. I fear I am entirely too matter-of-fact for that peculiar faculty of appreciation of the indistinct to obtain in my make-up. But my camera has made enough of an artist of me to enable the reproduction of scenes, records if you will, of many enjoyable hours of travel and tramping during the past four years. Not only this, but others have enjoyed the prints it has permitted me to obtain. More, its productions, through the post card division of the I. P. A., have enabled me to extend my acquaintanceship to other parts of our own country and to other lands; and many of these become friendships that are enjoyable and lasting.

Light and Shade

In nature we can put our hands into the shades, but we put them upon the lights.

Nature puts on the lights, and leaves the shades, whereas with crayon or pencil we put on the shades and leave the lights (i. e., the white paper).

Without shade, the white paper is not light, wanting the contrast of shade which alone can make it appear luminous and attractive.

In a drawing, the outline is to the contour of a real figure or body just what the light and shade are to the surface; the one leaves an object superficial, the other makes it appear solid.

The moment light and shade are introduced, the outline should cease to exist as an outline—it is no longer required.

Nature takes so much pains to conceal a distinct outline.—J. D. Harding.

The Successful Professional Photographer

By W. C. Dorn

Our Prize Article for July, Winning a Wold Air Brush

We know that some men succeed as professional photographers, and that others fail. We realize that this must be so, just as it is in every other sphere of human endeavor. We appreciate the fact that photography as a business, or as a craft, if you will, necessitates comparatively little training, and for that reason is liable to be overburdened with mediocre practitioners, conducing still further to a high percentage of failures. These things we know; but can we state absolutely and definitely just why one man succeeds and another fails? Can we give a rule that will assure success? Can we lay a course that will avoid the rocks of failure, one that will prove a true chart in every sea? I believe that this can be done.

Many a scientific theory is but a guess founded upon a mass of known facts; details that, in themselves, have but little value. To evolve a sound theory as to what insures success in professional photography, we have but to employ the innumerable facts that are presented to us on every hand. We have but to study the successful men in other lines to find that there are numerous conditions conducive to success while numbers of others lead to failure. These are our facts, our details. We have but to catalogue the most obvious and our theory becomes more than a guess; it makes for a definite course that can hardly result otherwise than in success.

First and foremost, the photographer must be a business man. He need not fear that his standing as an artist will suffer thereby. In this age of commercialism, lack of businesslike methods is much more inimical to the esteem of one's neighbors than a lessened reputation for artistic ability could possibly be even in a photographer. The first essential to a good business system is a working bank account, however small. Never mind how small, for, as I heard a banker inform a timid customer the other day, the banks like their checks scattered over the country; it encourages others to do business with them. By paying all bills, and even supplying yourself with petty cash, by check, and banking all money received, the stubs of your check-book give an accurate account of all your transactions, and the returned checks are the best of receipts for money paid. Your dealer will unconsciously hold you in higher esteem and you will have the reputation of being businesslike in your dealings. You will find yourself less likely to incur needless expense. You will take pride in seeing your balance at the bank increase from year to year, if such be possible.

Have system about your buying. Avail yourself of cash discounts whenever possible. At the same time do not ride this hobby too far or too fast. Pyro may cost you twenty-five cents an ounce, and by so buying it you can pay cash and avail yourself of a small discount. On the other hand, laying in a pound at twenty or twenty-five dollars will save you a much larger per cent, even if you have to ask your dealer for sixty or ninety days.

If you can buy the larger amount and at the same time secure the cash discount by a prompt check, so much the better. But here again is another hobby that can be ridden too hard. The persuasive salesman knows full well the strong argument of large lots and special prices. Carloads of mounts have been sold that were never used. They went entirely out of fashion, fire destroyed them and the insurance company failed to recognize their special value, the photographer sold out and the name embossed in such bold and effective lettering did not appeal to his successor. Remember that you are buying the goods the salesman offers. Trust him to remember that he is selling you all that he can.

Have a businesslike method of handling all orders. A simple card or loose-leaf ledger system is not hard to devise. The nearest bookkeeper will be only too glad to give you the benefit of his special knowledge. He will feel flattered at an opportunity to talk over your requirements and make suggestions; doubly so if his suggestions are adopted. He will be delighted to start you well with the system to be used, and the cost will be surprisingly small. Go over these cards or ledger leaves at least once a month. Weed out all the closed up transactions and make an effort to collect all money due you on account. At stated intervals go over the closed accounts and send each party a neatly printed announcement that will tend to keep your name and your facilities before him. No matter how small your business, conduct it in a businesslike way and thus secure the esteem of the business men with whom you come in contact. It is not necessary that you pose as an artist pure and simple too persistently.

As businesslike methods will bring you more directly in touch with, and into closer scrutiny by, the business men of your community, your honesty, both in business and in social relations, must be above reproach. Be honest with your patrons; be honest with yourself. Avoid any suspicion of catch-penny methods in your dealings. There are, unfortunately, unscrupulous venders of questionable schemes, men who would disgrace the entire profession were there not so many of the honest and honorable type as to raise the general average to a high standard. A reputation for honesty and integrity is one of the best assets a photographer can possess. He has but to place this between himself and the mountebank and the gulf will be so wide that all danger of his being wrongly classed is at once removed.

The next most important qualification is health, both of body and mind. The man whose body is tortured by pain, be it ever so slight, is in no way fitted for success. A toothache, even a corn, may mean the loss of many dollars to the man whose success depends so greatly upon his personality, his treatment of his customers, as does that of the photographer. Good health is mainly a question of right living, work that interests, and play that revives and recoups after too close application. Here again the saner course will be to your advantage. Take an occasional day in the fields with a fishing rod or gun. Do not begrudge the cost of either. You will come in contact with and be esteemed by others who appreciate the value of the same sane form of recreation. Your outlook will expand and your capacity for good work increase. Stay constantly at your work, venturing

SHERWOOD BAND MARCHING. By NICK BRUEHL

no farther than the nearest bar or lounging place for a few months, and observe how unimportant you quickly become in the estimation of your fellow men. Take part in what is going on about you; maintain good nature and that cordiality that inspires good-fellowship and respect. If your health is not of the best, conceal the fact. Sympathy you may find enjoyable, but it is as a rule too dearly bought. No one enjoys the company of a confirmed case of chronic complaint.

But I have almost forgotten to say anything about a healthy mind, a state, a condition, that is mainly a matter of habit. The healthy mind does not burden itself with a constant complaint concerning the state of the weather. The man who is forever blaming conditions over which he has no control for his lack of success will never want for an excuse, and success avoids such a state of mind; she is looking for the man who has no excuse barring the way to his door. The man who can see no chance of winning success is better down and out of the way. The mind that thinks failure and discouragement finds it awaiting him at every turn. The healthy mind has an appreciation of proportion. Small matters are not magnified and the large in import hold their relative size. A dollar at compound interest grows very rapidly. An apparently small matter of management that causes perhaps only an unconscious feeling of dissatisfaction to an occasional customer will eventually grow into a considerable curtailment of revenue. Twenty dollars a month is not a large amount, but it may mean the difference between a profit at the end of the year and the wearying effort to make things come out as they should. Twenty dollars a month will pay the interest on a sum of money that would be a power in your

hands. This twenty dollars a month may mean but the difference between an increase of five per cent and a five per cent decrease in your business, and there are a thousand little ways of making the increase or preventing the decrease. Watch for the apparently little things and try and see their real importance. Suppose your customers occasionally find it necessary to wander from your reception room in search of someone to whom their wants may be made known. They unconsciously feel that they are not being shown due attention, that their patronage is not fully esteemed. Change your method and try to make it a rule to be always ready to advance and meet a customer as he enters; if not in person, at least in the form of an assistant capable of showing interest and consideration. If, in following this rule, a toning bath should be spoiled for lack of personal attention, forget the fact. It is a really small matter. Living up to your determination to meet each patron promptly may be the means of adding that five per cent to your income; at least, it may prevent the five per cent loss. Take a lesson from the large store in the city. Its large expenditure for advertising makes every customer cost a certain amount, an amount that has been expended to get that customer to come into that particular store. Do they neglect any opportunity of impressing that customer with the fact that they are pleased to have him call? He can hardly enter the door before he is greeted by one of the floorwalkers, kindly solicitous as to his desires. How different is the impression and how much more cheerfully the prospective customer makes purchases. How much more easily does he convince himself that the goods are just what he wants.

A fourth consideration is a knowledge of the business. This qualification is not exactly fourth in importance; but, relatively, the other three are more worthy of consideration for the reason that they are more generally neglected. While we must not belittle the capabilities of a thoroughly good photographer, we must remember that our knowledge of the work leads us into hair-splitting differentiations that tax our efforts out of all proportion to the appreciation our customers can or will display. Draw out the man who sells you your next pair of shoes and, if he is well trained in his business, he will show you minor differences between certain grades that you never dreamed existed. Without this special knowledge the difference between a five and a seven dollar pair of shoes, as far as your own eyes served, was unrecognizable. No doubt the five dollar shoe answered your purpose to your entire satisfaction; possibly the seven dollar article, had it been sold to you as a five dollar one, would have given you even less satisfaction than the cheaper one. The slightly more pleasing lines of the last, the somewhat better texture of the leather, the more even stitching of the sole, all would no doubt have been lost upon you. It is much the same with pictures. How often have you been compelled to listen to someone laud the merits of a photographic portrait almost strikingly faulty, and felt that you were powerless to convince otherwise. We must not magnify or overestimate our own judgment in the matter. Too often it is not the result of sound taste but the creation of influences that in turn will be relegated to oblivion as a new set of teachers comes to our enlight-

MISS M.
By JAMES DANIEL MILLER.

enment. Our patrons are not the victims of any such bias. While their tastes are often faulty, our greatest art lies in giving them what they desire. Study their taste, seek to lead it in the right direction if you will, but give them what they like. The poorest photographer in the land can turn out a certain class of work, can easily delude himself that it is what his customers should want,—and starve. The better craftsman is capable of appreciating the wants of his customers, producing what will satisfy their wants and please them. If he can add his own touch of individuality, well and good. If he can endow this same work with an artistic quality in advance of his customers' power of appreciation, so much the better.

Still another advantage that is possessed by the capable photographer is his power to offer his customers evidence that he keeps in touch with

all that is new. Perhaps one out of every ten of the "new styles" will be found acceptable to your customers. That granted, it pays handsomely to place the entire ten before them in rotation. All will add to your reputation as a progressive photographer and the tenth will add directly to your income. Give your customers an opportunity of passing judgment upon such things at your own studio. Do not wait for them to find something that pleases their taste in the window of your competitor in the next town. Do not wait for your customer to bring you a portrait of Cousin Tom from the large city and ask you if you can make the same class of work. Show the new work in your own cases at the earliest possible moment. The cost will not be large, but the advantages will be great.

I had intended to say a few words on the matter of advertising; but this paper is already too long, I fear. However, I believe that low postage and the efficiency of the mails give the wideawake business man, be his line what it may, an advantage that he is only beginning to realize. In the territory surrounding our smaller cities and towns, a piece of neatly printed advertising matter still has a great value; a value that it does not have with the residents of more commercial communities. I would therefore advise photographers to consider the possibilities of such publicity. A neatly printed folder, small and tasty, particularly if it contains an attractive picture, will be given attention, and the photographer will profit accordingly. A neat card should be carried regularly in his local paper and, if the photographer feels that he can give the time and the requisite knowledge of the subject to the production of constantly changing catchy announcements, so much the better. This, however, is a subject in itself, and all I can do is to warn him that the line between a catchy announcement and buffoonery is not always realized until too late.

FISHING IS SUCH FUN. By NICK BRUEHL

Pictures versus Records

By Roy J. Sawyer

This article is given room for the same reason that space was allowed Mr. Smallwood, a few months ago, in which to set forth his views. There seems, however, a tendency to disregard the important fact that different subjects require different treatment. Flowers and some still life subjects can hardly be effective except with the most minute detail. Genre studies, even those by the acknowledged masters, are often full of fine detail throughout. The landscape work of the late A. Horsley Hinton could hardly be classed as unsharp, and yet he was a master in the portrayal of nature's moods. On the other hand, some of the most pleasing examples of pictorial photography in late years have been of such a character that they could be viewed only from a distance. And, just as one person likes rag-time and another grand opera, there will always be a difference of opinion as to what is pleasing in a picture. Articles such as the one herewith can only assist the reader in determining his line of procedure. We must each work out our photographic salvation in our own way.

There was an article published in "Camera Craft" some months ago, obviously written by one belonging to the "old school" of photography—that is to say, the class that photographed nature, regardless of her mood, and conventional street scenes and buildings, all in the same manner. They are content to produce a microscopically sharp negative, entirely lacking in individuality based on the aspect of the scene at the time, merely carrying out the idea of the fledgeling amateur who delights in extremely sharp negatives and their resultant wealth of detail in the print. True, the "old school" worker has learned the knack of filling the plate to better advantage, and his experience and technical knowledge make the matter of exposure and development more uniform and certain; but that is the only difference. Occasionally, the arrangement of line, possibly of mass as well, will give him a decorative effect; but the same thing will often happen in random snapshot work.

I well remember my own first attempts, and how proudly I would show the pictures of my home and its surroundings, with each brick clear and distinct, even the bark on the trees being full of detail, and demonstrating beyond a doubt the value of U. S. 64 in producing extreme detail. However, after enjoying nearly a half score of years (photographic ones), and entertaining in that time an equal number of different ideas as to what constituted a picture, I have arrived at the following conclusions: A print must belong to either the pictorial or record of fact class. If a photographic print succeeds in its mission of impressing upon the beholder's mind the effect intended, it can, at least, be set apart from the one that is merely an exact reproduction of the scene photographed without a trace of individuality either in conception or treatment.

We are moved by music because of the impression it conveys; and, as music pleases the ear on account of its power to create an impression, so does a print please the eye if it contains the essential elements necessary to create the impression intended. The paintings of the great masters are pleasing to the eye because the mind finds pleasure in the effect which the picture, taken as a whole, conveys. The eye of the artist, in its mission of finding the pictorial in nature, conveys to his mind the impression of the scene, taken as a whole, entirely ignoring the detail in

QUIETUDE.

the bark of the trees and the number of grass blades in any certain part of the view. These details, playing no part in the general effect which inspired the selection, are not required in the picture intended to convey the effect or impression in turn to the beholder of the print.

If a certain "bit" of nature appeals to one as being worthy of being recorded, should it not occur to the mind that there is a reason for its so doing? Perhaps the old, winding road, with the willows at the side, viewed in the peaceful calm of an evening light, suggests, "The Close of Day." Possibly the misty river with an old skiff in the foreground and the dim outline of trees on the further shore, enshrouded in haze, brings to the mind the effect of "Early Morn." These are only examples of Nature's varied moods, all of them beautiful, if one will but cultivate an appreciation of our great Instructor's countenance.

It matters not by what means the effect one is striving for is produced, as long as legitimate bounds are recognized and there is an avoidance of the bizarre and sensational; as, to my mind, a print that represents only a certain amount of black and white distributed over a given surface, apparently without motive, is to be abhorred. One should have a definite purpose in mind for each picture made, and not endeavor to produce a certain effect in a certain way, because someone else has produced a successful picture by those means. I once photographed a certain pretty bit of nature in an endeavor to reproduce an evening effect; but the resultant print showed so much detail that the effect was spoiled. The insistent detail destroyed the impression it would have been capable of conveying had it been suppressed. As the scene appealed to me, I tried again, using full opening of the lens and slightly diffusing the entire focus;

THE FOOTPATH IN WINTER.
By ROY J. SAWYER

with the result that the picture not only satisfied my own requirement in no small degree, but it passed muster in the eyes of a salon jury. I do not at all claim to be an expert in judging pictorial work, but I do know that certain pictures gratify the eye through the favorable impression created upon the mind, solely because they convey the effect that their makers sought to secure.

I would not have it thought, however, that, in order to be artistic, every trace of detail should be eliminated from the picture; for, in numerous cases, detail in the foreground is essential. In combination with a soft, atmospheric distance, a well-defined foreground is necessary for the rendition of certain effects. In a snow scene, for example, the texture of the snow with its detail and gradation in the shadows, particularly in the foreground, is observed and appreciated by the eye when viewing the scene; and this quality should be preserved in the pictures. Only the distance, which is not taken into account as to texture, should be softened. The effect of the scene upon the mind should determine the treatment. And it is only by asking ourselves what produces the effect that we can determine what to emphasize and what to subdue in our picture. Even should the result of our efforts not meet with the approval of a salon jury, one can at least feel that there is some originality shown, some of his own individuality displayed.

I must not forget to mention that there is one class of subjects that, in my judgment, should always be photographed with all detail possible, and that is flowers. In viewing them, the eye always finds pleasure in their form and texture, as well as in their coloring, which last is denied us in ordinary photography. For that reason, diffusion of focus, except as to backgrounds. should be avoided in flower studies. We must remember that the camera is but a mere machine to be used as a means of producing results, results more or less satisfactory according to the skill of the operator. To merely photograph a scene as it appears upon the ground glass after being sharply focused, stamps the photographer as being but a mere machine as well.

When the average amateur passes through the embryo stage, when houses, street scenes, and moving locomotives become a "drug on the market," his album of prints palls; he realizes that it contains the same identical kind of work that an intelligent child of twelve can produce. It is then that he will naturally look for something higher, something that will lift his work from out the rut of the ordinary snapshot fiend to that plane occupied by the pictorial worker. That is, if he be one of those amateurs who have a real interest in photography, who realize that the making of real pictures is the goal of their cherished ambitions for those who love their hobby enough to desire to progress. One print having pictorial quality is worth more than a hundred of the other kind. It is something that has a message to convey, something of which one does not tire.

It is not difficult to become an automaton, going through the few simple details necessary in order to secure on the plate an exact record

THE FRESH BROKEN ROAD. SUNLIGHT AND SHADOW.

of the scene as the lens sees it; but should not one strive to put some of his own individuality into his work, becoming, by so doing, one of the few, instead of remaining one of the many? Does your clear-cut house, street scene, or moving locomotive, with all its harshness and detail, appeal to you further than as an example of what your lens can do and your skill in timing and developing produce? Will these prints ever have more than passing interest? Will they, as years go by, remain in your album as pictures of which you may be proud? As records, possibly, they may some day have a value, just as an old newspaper file may have

And these records are interesting, in their way. As a member of the International Photographic Association, I have made my share of them. I find that members like to have prints typical of the location in which one resides, records as it were; and, of course, detail is of first consideration in pictures of this kind. But these pictures can never occupy a place in my album as my cherished productions. I find that, while many amateurs remain mere recorders of dry facts, the foremost ones have graduated from excessive detail in their pictures to the broad, artistic effects, that are so pleasing to the appreciative eye. And, most significant of all, they never return to the starting point. Are **you** moving forward?

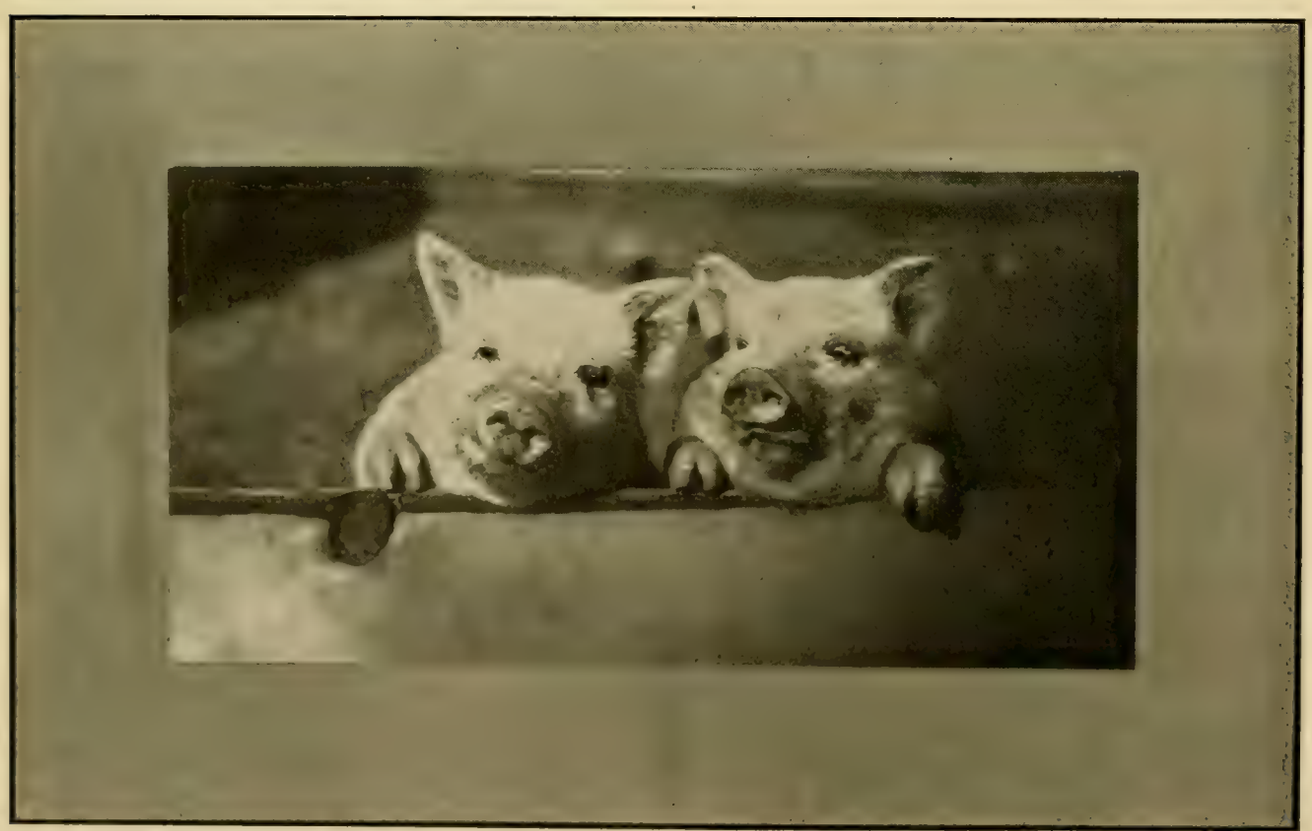
The few prints submitted with this article are not offered as examples of perfect composition; neither are they perfect as to execution; but they portray, fairly successfully, the several scenes and those qualities of the scenes that impressed me at the time of taking them.

Portraiture Under Disadvantages

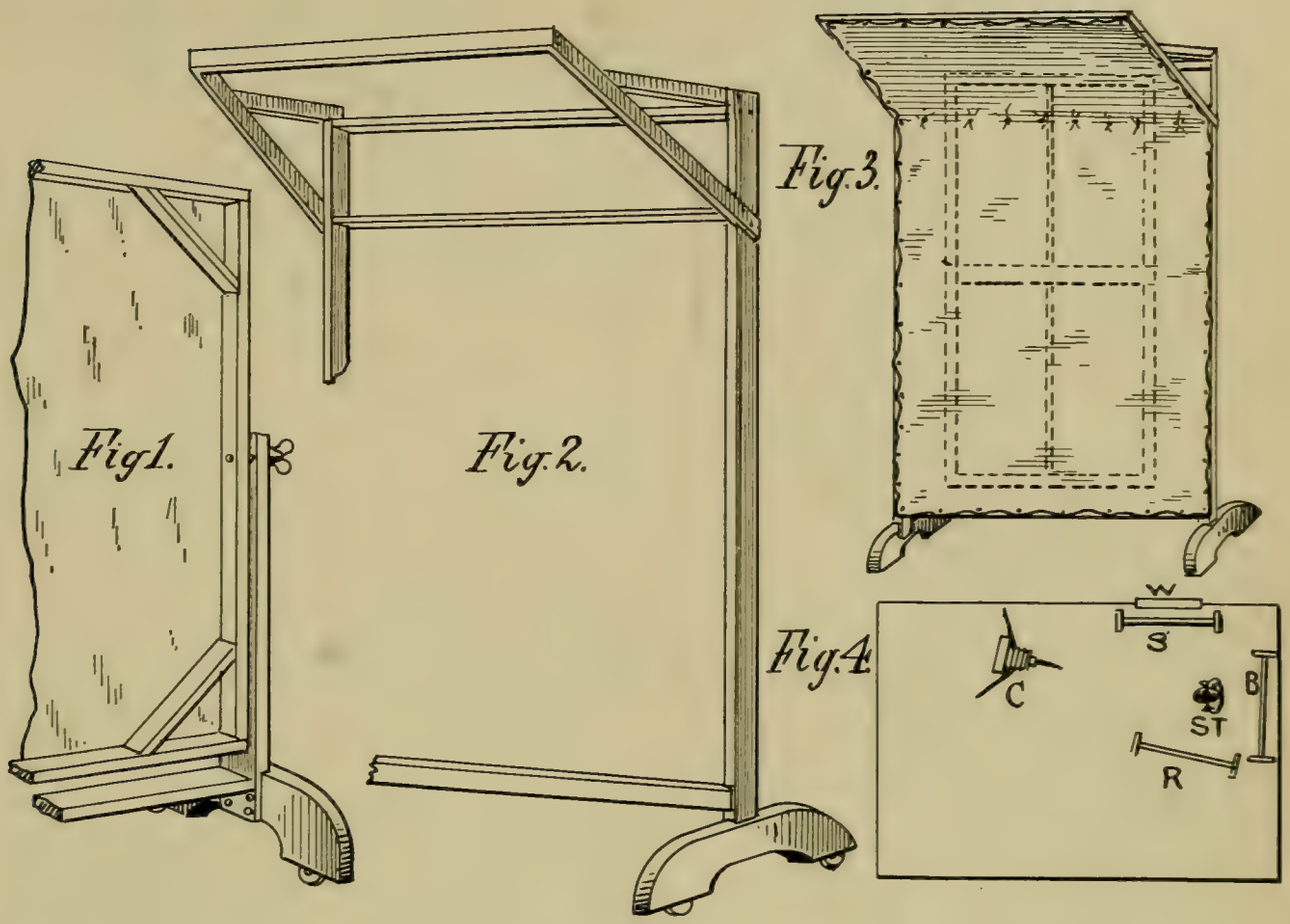
By L. R. Godden

Once upon a time, as all good stories should begin, and this poor one may be allowed to do, I found myself in a place where it was very desirable to embark in portrait photography in a small way; but, all the facilities thought to be necessary for this special line of work were wanting. There was no skylight available, and no backgrounds, reflectors, or screens obtainable without a delay that was out of the question. It may interest some of "Camera Craft" readers if I describe the means taken to overcome the difficulties. There may not be anything particularly new in the way I went about the work; but, as I have found the same home-made utilities so practical that they have been used many times since, even when the more showy articles of the shops were available, I will give an account of their construction.

I secured a room some eighteen feet long and with a north window about three feet from one end. There were other windows in the room and all of them were of the ordinary house variety, about three by six feet. All except the one mentioned were screened off with good opaque curtains that happened to be in place. I had to have a reflector to light up the shadow side of the face. This was made of good, generous size, about 5x7 feet, swinging horizontally as shown in the sketch of one side in Fig. 1. The frame proper is of one-inch stuff; the side pieces, 1x2, and the feet cut out of 2x6, planed down to about 1½x6. The screen being



INQUISITIVE PIGS. A STUDY IN MODERN PORTRAITURE. By PHIL A. FRIEDELL
Bright sun, outdoors, 3:30 P. M., March, 1/25 second, f-22, Hammer E. F. plate, Hall Reflecting Camera, one-fourth inch slit, Wollensak lens, full opening.



swung at the center, that part is about three feet from the floor. The framework was covered with stout paper pasted over cloth, and given two or three coats of clear white kalsomine. This made an excellent reflector, and with the swing in the center I found I could get the light wherever it was wanted.

But even with my big reflector, I discovered, as many another has probably done, that the light from my window was altogether too direct and concentrated. To obviate this I constructed a screen, one side of which is shown in Fig. 2, designed to be placed in front of the window as shown in Fig. 3. This, as can be seen by the sketches herewith, consists of a framework of wood covered with cheesecloth, the covering starting some few inches lower than the window sill, extending perpendicularly to within about ten inches of the top of the window, and from that point extending forward and upward at an angle, as shown, for a distance of two feet more. As shown, it was somewhat wider than the window. Tracing cloth is more desirable than cheesecloth, being more durable as well as more translucent. Of course, one might secure about the same results by tacking the cloth directly upon the window casing up to within eighteen inches of the top and carrying it from that point out overhead a few feet with wires, but I believe the screen gives a softer and more diffused light, better under control, with the added advantage that it can be easily removed to one side when a contrasty lighting is wanted, or short exposures are imperative, as for baby pictures. I might add that, when an extra

large or double window is the source of light, the screen has been found even more desirable. With such an arrangement every necessary lighting may be secured.

I was fortunate enough to have a fairly good ground with me, but occasions demanded a plain white and a gray ground, and a ground of larger size. And again the kalsomine came to my relief. I found that almost anything answers for the surface; cloth, paper, even a wide strip of burlap which had to be patched before the kalsomine was applied. An excellent white one, suitable for vignettes, was made by giving another old ground that I had, three or four coats of the white kalsomine, to which had been added a little blue, just enough to tint it slightly. This gave an excellent white in the print while avoiding the glare that a pure white surface would have had. The kalsomine comes in a variety of shades and colors, almost any of which can be used for grounds. The reddish browns give a good gray in the print; a dark green gives a gray of a somewhat different tone. The beauty of the stuff lies in the fact that it is easily prepared, can be applied with almost any brush that comes handy, and dries perfectly smooth; this last an advantage not possessed by other coloring media.

Figure 4 is introduced to show the arrangement of camera, screen, background, reflector and sitter, as used in the room mentioned. The blocking off of the lower part of the window with some opaque material can be done at the option of the photographer, although I have found it better to cut off the excess of light at that point by making the lower part of the screen opaque by means of some dark material.

Art—What Is It?

Ars est celare artem.—Ovid.

Ars longa, vita brevis.—Hippocrates.

Art is long and time is fleeting.—Longfellow.

Art is not the bread indeed, but it is the wine of life.—Jean Paul.

Art must anchor in nature, or it is the sport of every breath of folly.—Hazlitt.

Art is the work of man under the guidance and inspiration of a mightier power.—Hare.

Art rests on a kind of religious sense, on a deep, steadfast earnestness; and on this account it unites so readily with religion.—Goethe.

Nature is not at variance with art, nor art with nature; they being both the servants of his providence. Art is the perfection of nature. In brief, all things are artificial; for nature is the art of God.—Sir T. Brown.

To gild refined gold, to paint the lily,
To throw a perfume on the violet,
To smooth the ice, or add another hue
Unto the rainbow, . . .
Is wasteful and ridiculous excess.

—Shakespeare.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, JULY, 1910. No. 7

Tenth Annual Pacific Northwest Convention

Just too late for mention in our last issue came the program of the next convention, the tenth, of the Photographers' Association of the Pacific Northwest, to be held at Vancouver, British Columbia, August second, third, fourth, and fifth. It is going to be a rousing convention, because the Canadian delegation have long promised they would show the others what could be done when it came their turn to have the gathering in their territory. Vancouver needs no praise, and early August in that city is simply ideal. Pictures intended for exhibition should be sent to George T. Wadds, 338 Hastings Street, Vancouver, British Columbia. The address of the Secretary, W. G. Emery, is Vancouver, Washington. So there is no excuse for any photographer in Oregon, Washington, Idaho, Montana, or British Columbia, not finding out all about it in time to send a display, and follow it in person a few days later. It is to be the best convention this wide-awake association has ever held or the Canadian delegation will be sadly disappointed, and they are not in the habit of so being.

Mr. Thors Passes Away

Louis Thors, one of the oldest, best, and most highly esteemed of the local photographers, passed away, Saturday evening, June fourth, at a sanitarium in Oakland, to which he had been removed a few days before from his home in this city. Cancer of the stomach was the primary cause of his death. He was seventy-two years of age; and, except for an absence of about two years following the fire, during which period he operated a studio in St. Louis, Mr. Thors had been identified with the photographic business of this city for some forty years. Of French descent, Mr. Thors came to this country from Amsterdam, Holland; and his skill as a painter at once secured him employment with Bradley & Rulofsen, then the leading photographers on the Coast. His skill as a retoucher, an art which he rapidly acquired, decided his future; and his success with a studio of his own was most gratifying, despite the presence in the field of such masters of the camera as Tabor, Morse, and others. Mr. Thors was loved and respected by all who knew him, not only for his skill as a photographer, but for his charming personality, his unvarying courtesy, his high moral character, and his keen and cultivated mentality. His loss is one that is deeply felt by a host of friends, who valued most highly that warm friendship which he so freely gave in exchange for the friendship which he so universally compelled from those who came within his sphere of acquaintanceship.

The New England Convention

Under the able management of President W. F. Oliver, the Thirteenth Annual Convention of the Photographers' Association of New England, to be held in Boston, July twenty-sixth, twenty-seventh, twenty-eighth, and twenty-ninth, promises to be a record breaker for that enthusiastic Association. Mr. Oliver is sending out some very convincing announcements and announcements that do not deal in glittering generalities. Ryland W. Phillips, J. Hammer Croughton, and C. H. Claudy will talk on vital subjects, and they alone are worth going a long way to hear. Twenty-one prizes will be awarded, and a photographer who will not try to win one out of twenty-one prizes at a thirteenth convention ought to have a string of rabbits' feet tied around his neck. If you are a New England photographer, get into communication with President Oliver; his address is Baldwinsville, Massachusetts.

A Complete File

The California State Library is desirous of securing a complete file of "Camera Craft." Owing to the fire of 1906, we are not in a position to supply it, despite our desire to do so. Just after the fire, we asked our readers to favor us with back numbers that they could spare in order to give us a file, and several complete sets were offered us. These we did not care to accept, feeling that the owners valued them or they would not have gone to the trouble to keep the sets complete; making up our own file from the odd numbers which were offered. As we understand it, there is no provision made for the purchase of such back numbers of magazines by the librarian; but we are calling attention to the library's wants, feeling that perhaps this might reach the eye of someone in possession of a set that he would be willing, at this time, to put to so good a use. We can ourselves supply the issues published since the fire, and possibly, from our stock of back numbers, fill out one or two of the years immediately preceding that date—May, 1906. A letter addressed to J. L. Gillis, Librarian, California State Library, Sacramento, California, will be given that gentleman's usual prompt and courteous attention.

What Sight Is

All sight is, in fact, an act of judgment. The brain receives messages from each retinal element, and from these messages it constructs a mental picture of the actual scene, much in the same way that a general, whilst a battle is going on, receives messages from all sides, and from these messages forms his idea of what is happening on the field of action. So far does the analogy hold, that the mind supplies from its own knowledge a great part of the mental picture, the actual messages from the retina being quite insufficient to give a complete perception of the scene without.—John Collier.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

TIME AND TANK DEVELOPMENT.

The growing use of one or both of these methods is leading to much investigation and discussion. Among the most valuable of the contributions of the month is a paper by S. H. Wralten and Dr. Kenneth Mees in the "British Journal of Photography." It should be read by all students in full, but the gist of the investigation is contained in the concluding paragraphs here given:

The extent to which development has progressed at any time therefore depends on two different factors, the maximum contrast which a plate will give, and a velocity constant depending on various circumstances.

Returning now to the subject of time development.

With the increasing use of time development it is too frequently forgotten that the time for which a plate requires developing is dependent on the two factors given above; also that the application of any rules found for one batch of a particular plate to further batches of that plate depends on the constancy of those two factors from batch to batch. To state the degree of constancy of those two factors for all plates is not possible, but we have measured both factors for our own plates for the past four years, and we have arrived at the following results:

The maximum Contrast of a plate is reasonably constant from batch to batch; it is, of course, the object of the emulsion maker to keep it so. Varying circumstances do, however, introduce considerable variations, amounting in extreme instances to thirty per cent or forty per cent.

The chief of such circumstances are:

Sudden changes of weather during the making of the emulsion.

Sudden changes in the water supply due to heavy rains.

Changes in the gelatine used.

The Velocity Constant of development (at the same temperature, and for the same developer) varies very greatly with different batches of the same plate. This is mainly conditioned by the rate at which the plates dry, which, even in completely artificial drying systems, such as those used by plate-makers, is always affected to some extent by external weather conditions. Moreover, any change in the gelatine always affects this factor at once.

Measurements made of different batches of various other commercial plates confirmed these results. Thus, in the case of two batches of one plate purchased at the same time, one took four minutes and the other seven to develop to the same degree of contrast.

Generally, our experience is that it is quite unsafe to deduce the time which a plate will require for development from previous experience with other batches of the same plate if any appreciable time has elapsed since those batches were made.

It is usual, in systems proposed for the development of plates by time, to provide for a correction to be applied for other temperatures of the developer than the "standard" one. Such corrections are usually based on a so-called "temperature coefficient" of the developer, which corresponds to the variations in the velocity constant of development with that developer, produced by variations in the temperature. All such corrections, consequently implicitly contain the assumption that the temperature coefficient of a developer is independent of the plate employed.

There appears to be no justification for this assumption. It was not made by Ferguson and Howard in their work on the effect of temperature in development, and one of us experimenting with S. E. Sheppard found that different plates behaved differently in this respect. During the last year we have made a further investigation of the subject.

That investigation showed that:

The effect of temperature is greatly dependent on the plate.

It does not vary appreciably between different batches of the same plate.

It is usually much larger in the case of slow than of fast plates, but this is not necessarily true.

In the case of some plates the effect of temperature within wide limits may be very small instead.

The temperature coefficient of a developer for the same batch of plates is only constant within small limits of temperature.

We conclude, therefore, that tables giving corrections for temperature are not of practical use in calculating the time of development for commercial plates.

The considerations which we have set forth above, therefore, lead us to conclude:

That the calculation of the time of development of plates by the aid of tables is likely to be misleading in consequence of the variation of the governing factors with different batches of the same plate.

That correction of the calculation for varying temperatures is also likely to be misleading in consequence of the wide variation between the effects upon different kinds of plates.

That development of a plate to a fixed degree of contrast by time alone can only safely be practiced if the temperature correction be known for the plate used, and the maximum contrast and velocity constant for the particular batch used.

This latter condition leads to the following conclusion:

Development by time can only be successfully and accurately accomplished if the time required for development is found for each batch of plates, either by the maker or the user.

It must be observed that the conclusions which we have reached only apply to time development, and not to factorial development.

Factorial development consists of the observation of the time required for the first appearance of the image, and the multiplication of that time of appearance by a fixed factor. Variations in the time of development due to alterations of the temperature or of the velocity constant and maximum constant of the plate also affect the time of appearance in the same ratio, and consequently are compensated for by the Factorial system.

The only objection to the factorial system appears to be the exposure of the plate in the early stages of development to the darkroom light, an exposure which renders it impracticable in the case of strongly color-sensitive plates. Even this difficulty may be avoided by the use of separate trial strips to determine the "time of appearance."

"Photography," writing editorially on tank development, points out that dilution of the developer can easily be carried too far, and maintains that the best results are obtained with a fairly strong and therefore quickly acting developer. This is a conclusion I had already arrived at from my own experience. Personally, I am using and getting excellent results with the acid amidol developer ("Camera Craft," March, 1910) diluted three times. A tankful lasts me three days without loss of quality. The "Amateur Photographer" recommends the following formulae for stand development:

For very prolonged development, a dilute glycin developer will be found suitable, owing to its freedom from tendency to stain.

A stock solution of glycin is made as follows:

Boiling water	4 ounces
Sodium sulphite	2½ ounces

When dissolved, add

Glycin	1 ounce
And then in small quantities	5 ounces

This solution takes the form of a creamy mixture that must be well shaken before use.

For normal stand development take:

Stock solution, as above	1 ounce
Water	100 ounces
Potass. bromide, one per cent solution	100 minims

In this dilute solution, development will be complete in about four hours.

This developer will serve perfectly for all types of exposure. If, however, underexposure is known to exist, the bromide may be omitted, and one ounce of ten per cent solution of soda hydrate added.

For known over-exposure, the bromide may be increased to one ounce of the ten per cent solution.

Complete development in this solution will take about one hour.

Development is considerably quickened by reducing the quantity of water, or increasing the proportion of concentrated developer. A solution of one in sixty will give a fully developed plate in about fifteen minutes, but care must be taken to move the plates occasionally, or markings may occur.

The combination of metol-hydroquinone is also a good one for stand development. The following formula may be used successfully:

Metol	35 grains
Sodium sulphite	2 ounces
Hydroquinone	50 grains
Sodium carbonate	1½ ounces
Water	80 ounces

This is fairly rapid in action, and works cleanly and evenly.

Pyro can also be used, and is a well-tried and reliable developer for stand development. The quality of the negatives given, and the characteristic color, render pyro always popular. The Ilford pyro-soda formula has been found a good one for the purpose. It is:

Stock solution:

Water	5½ ounces
Potass. metabisulphite	70 grains
Pyro	1 ounce

The working solution for ordinary development is:

A Stock solution	1 to 2 ounces
Water	20 ounces
B Sodium carbonate (crystals)	2 ounces
Sodium sulphite	2 ounces
Potass. bromide	20 grains
Water up to	20 ounces

For normal stand development take equal parts of A and B, and add four times the volume of water.

The foregoing developers have been used successfully for the production of negatives for stand development; but practically any standard developer, used in a more dilute form than for ordinary dish development, will also prove successful for stand development in a tank.

BROMOIL.

R. H. Wyatt, writing to "Photography," describes a new mode of working that possesses some distinct advantages. He says:

To bleach the bromide print I take some ozobrome solution diluted with four times its bulk of water. (It was diluted some fifteen months ago.) Three-quarters of an ounce of this and a quarter of an ounce of alum solution (three hundred grains to ten ounces of water) and a quarter of an ounce of citric acid solution (thirty grains to ten ounces of water) are added together. I previously tried the ozobrome solution without these additions, but failed to get a satisfactory relief. With the addition of alum and citric acid it works perfectly. After bleaching, the print is washed in two changes of water; in cold weather I use water which has the chill taken off, temperature sixty-five degrees to eighty degrees Fahrenheit. The print next gets its sulphuric acid bath, followed by two quick washes, and is then left lying in a dish of water exposed to the light. The hypo bath is dispensed with entirely.

It is important that the print should not float on the surface of the water and allow parts to be exposed to the air, as if it does these parts will pigment up more darkly than the rest and cause much trouble. Some papers will lie naturally at the bottom of the dish, others will float if allowed to do so. These must be kept down, not by placing anything across the face of the print or a mark will result, but by affixing something to the edge. I find that four small brass clips such as are used for putting through papers to fasten them together, pushed one on to each of the four edges of the print, are quite sufficient ballast to keep the most buoyant paper in position.

The advantages which may be claimed for this method over that which is ordinarily followed by those who work the bromoil process are four in number, and may be summarized thus:

There is a distinct image to guide one while pigmenting, and this image is entirely obliterated by the time the pigmenting is concluded.

There is one bath less required for the preparation of the print, and there is a corresponding saving in the time.

It is possible to prepare the print in any odd quarter of an hour which may be available, and to leave it in the water until it is convenient to complete it. I have left prints for seven or eight hours in this way, and I have no doubt that a much longer time would make no appreciable difference.

Fourthly, there is a comparatively small percentage of bad results.

Of course, if the photographer wishes some portion of the picture to be white when it prints dark in the original bromide, this method is unsuitable. The print may be made darker in any part, and tones may be lightened quite as much as ever ought to be necessary. When the manipulator wishes to change black into white he is almost on the eve of deserting pure photography.

The illustration accompanying this article requires a few words of explanation. The view entitled "Mosspaul" was prepared at 2 p. m. and completed at 6:30 p. m. The sky in this was a blank. I have worked up the sky more than I should have done otherwise in order to show how readily paper prepared in this way takes the pigment. In other respects the print is a straight one in every way, except that a rather softer ink has been used to strengthen the foreground a little.

BROMIDE AND INCREASE OF CONTRAST.

Messrs. A. and L. Lumiere and A. Seyemetz publish in the "Bulletin Societe Photographie Francaise" an account of their researches on this subject, with the following result:

The property which bromide possesses when added to developers (of increasing the contrasts) is not exhibited by other haloid salts nor by other bodies which increase the time of development.

The experiments indicate that this specific property is possessed by bromine in the form of soluble bromide, or by organic substances capable of conversion into bromide by the alkali of the developer.

The results throw no light on the theory of the behavior of bromide in the developer. They suggest that the action of soluble bromide is perhaps due to combinations formed with the silver bromide which has been exposed to light, which compounds are not formed with other soluble haloid salts. It is possible that these compounds are more difficultly reducible by the developer than is exposed silver bromide, an assumption which would explain the increase of contrast by bromides.

GRADUATED COLOR-SCREENS.

Some few years ago many of us remember the advent of Alvin Langdon Cobourn in this city, and the enthusiasm for gum printing that followed. Since then Mr. Cobourn has become a light in the photographic world, and although, like so many of our artists, he has left us for the British field, we always follow his work and writings with interest and affection. I therefore make no excuse for transferring to our pages the following letter from him to our contemporary, "Photography":

There is a sort of mad joy about acquiring a new piece of photographic apparatus. The exact sensation is difficult to define, and really has to be experienced to be appreciated. To buy a camera and use it for the first time is an adventure, to find out the capabilities of a new lens is a joy forever, but to acquire a graduated color filter is to run out of superlatives.

The idea, like so many good things, is so simple that one wonders why it was not thought of long ago. Who has not felt the need of more exposure in the foreground of skyscapes? Long ago, in the dark ages, people used to make what were termed "combination prints." They took the cloud from one negative and combined it with one or more bits of foreground from others, which resulted in something the like of which was never seen on sea or land; but now such complicated proceedings are unnecessary. One simply gets a Sanger-Shepherd graduated screen and the trick is done.

Perhaps I had better explain that the filter is a deep yellow at the top, and tapers toward clear glass at the bottom; also that it slides up and down in a ring that fits on the end of the lens. This sliding adjustment allows one so to arrange matters that a high or low horizon may be taken into account.

Personally, I do most of my landscape work with a quarter-plate Reflex. There was a time when I used to break my back with a 10x8 stand camera. I would carry the great thing about with me all day and get so tired that I had not the energy to

make an exposure. But I am getting older and wiser. On the ground glass of my reflex I can easily determine the amount of screening necessary. The filter I have is about ten times at one end and no times at the other, and, of course, the exposure varies according to the extent it is slid up or down. There seems always to be a tendency, I do not know why, to over-expose cloudscapes and under-expose sunsets, unless one uses some sort of guide.

I myself always use an exposure meter now, and there is no more trouble. Of course, it will not think for you, and it must be mixed with an equal part of common sense (saturated solution); but it is a wonderful help in any sort of photography that depends on accurate timing so much as does cloud work.

I well remember the first time I saw one of these screens. It was in the corner of the "Fountain Court" of the New Gallery, when the R. P. S. was holding its annual exhibition. They were of various shapes and sizes and depths of color; in fact, they made a noble display that would have gladdened the heart of any enthusiastic knight of the lens. As I was just starting on a tour in Bavaria, I at once got one. All this happened some two years ago, but negatives, like wine, improve with the keeping, provided you have washed all the hypo out of them. For as time goes on you realize which are the best ones. So before long I expect some of these pictures will blossom forth from their negative buds into full-blown exhibition prints.

When I think of those negatives and their making I feel like breaking into verse—into the poetry of cloud photography. The rhythmical utterance of one of nature's most inspiring spectacles. For who has not gazed in wonder at these great white and silver giants towering majestically above us, and wondered why they are there. Another of nature's great mysteries. Perhaps they were invented on purpose for the photographer. At any rate, his subtle art is necessary to do them full justice, for moving clouds and water seem to me to be the special province of the camera.

I can hear the editor saying, "Why is he writing all this nonsense about clouds? What my readers want is a practical article on how to use a graduated filter."

Perhaps he is right!

Well, my advice is this: Get one of these screens, and on a fine day—just after a storm has cleared is best—walk out over the countryside with an open mind and loaded dark slides. Study carefully with your eyes and on the ground glass the panorama of the sky, and be sure that your plates or films are isochromatic. Beyond this you are in the hands of the gods.

I am not aware that graduated screens can be obtained in the United States. J. Griffin of Kingsway, London, make two forms; one called the "Grada" is graduated, but fixed. It sells for from two to five dollars, according to size. The sliding form referred to by Mr. Cobourn is called the "Iris," ranging in price from three to ten dollars.

STEREOSCOPY WITHOUT A STEREOSCOPE.

In a recent letter to the "Amateur Photographer," T. E. Heath stated that, when the corresponding points on two stereograms were separated by an interval not exceeding two and one-half inches, he found the use of a stereoscope unnecessary. He asked for the experience of others, pointing out how greatly stereoscopic illustration would be extended if such were the general experience and could be universally employed. This has led to much correspondence and comment. As the subject is one of practical importance, I reproduce some of the answers and criticisms. First, as to mode of views, one writer says:

"My method is to look straight at the center of the division between the two stereograms, and gradually to change the focus of my gaze, as though I were looking through the picture, at that point, to the full extent of my range of vision. Very gradually, thus gazing, I approach the picture, and when I have reached the distance at which I could comfortably read small type, the stereoscopic relief picture has formed itself perfectly. I find it a help, but not a necessity, to make 'blinkers' by curving my hands round my eyes on either side.

"I experience no strain to my eyes so long as my sight, which is focussed on distance for this stereoscopic seeing, is not transferred with a sudden jerk to other objects actually in the same plane as the

picture, but, of course, requiring a reading distance focus."

To this another adds:

"For seeing paper prints stereoscopically, I should hold a card, black on both sides, in contact and at right angles to the division of the prints. Such difficulty as there is in getting the stereoscopic effect is due, I believe, mainly to the inequality of lighting of the two halves, unless special care is taken to prevent such inequality."

The "British Journal of Photography," noting the correspondence, writes as follows:

SEEING STEREOSCOPICALLY WITHOUT A STEREOSCOPE.

In two contemporaries we have lately seen a suggestion to the effect that when stereoscopic slides are mounted with a separation not exceeding two and one-half inches they can be seen stereoscopically without the aid of a stereoscope. Slides so mounted are published in each case, and readers are asked to send up an account of their experiences so that the writer may ascertain the facts or the case. All this strikes us as somewhat unnecessary, because the facts of the case are already very well known. So long as the observer is not required to produce an adjustment of the eyes that is impossible to him he can always see stereoscopically without a stereoscope after a little practice. As a rule, we cannot make the visual axes diverge—a few people can, but they are exceptions—and as a consequence we cannot combine pictures that are separated by a greater distance than are our eyes, the average separation of which is about two and one-half inches; therefore this is the limit of separation for a slide that is to be viewed without any instrumental aid. There seems to be much misconception on this subject of seeing stereoscopically, and we notice mistakes in both of the communications we are referring to. In one the following instructions are given for producing the required effect. The reader is told to hold the print horizontally at the distance he reads fairly small print. Look straight forward, but easily, at some conspicuous object in each photograph. Suddenly or gradually the objects will approach each other till they melt into one. But nine times out of ten, or possibly ninety-nine times in a hundred, the merging of the prints when produced in this way gives a pseudoscopic effect, because the observer squints. Often the fact that the result is pseudoscopic is not noticed because this is rather a subtle effect that few people are acquainted with, but two other tests are available. When seen by squinting the image is apparently much smaller than when seen properly, while if the left eye is shut it will be found that the right eye is looking direct at the left-hand picture. The best method of getting the true effect is the following: Hold the slide at a full reading distance, and vertically, not horizontally, look over or under it intently at some distant object some ten or fifteen feet away. Then suddenly interpose the slide between the eyes and the distant object. Four images will then be seen, and the two center ones will merge together and give the stereoscopic effect. A little practice is required, but the accomplishment is very easily acquired.

SPLENDID PHOTOGRAPHS.

N. A. Howard-Moore, the well known amateur photographer, has placed four of his beautiful pictures on exhibition at McDermid's drug store, to give the public an opportunity to view his artistic work, work that is well known to all camera men. The pictures are: "The Stream," "On the Otonabee," "The Crane's Roost," and the "Old Beach." The latter is a picture taken in Jacksons Park. The different features of the scene, frequently witnessed by the people of this city, are distinctly brought out in the photograph. These pictures have been exhibited at Jamestown, New York, Montreal, Toronto, and Winnipeg.—"The Examiner," Peterborough, Ontario.

A REPORT FROM PRESIDENT LIVELY.

A letter from President Lively, of the Southern School of Photography, advises that the season's attendance is most gratifying; in fact, much larger than they had thought possible. Better still, those in attendance, are showing a marked degree of enthusiasm that foretells rapid and exceptional progress. Seventeen States and two foreign countries are represented in the enrollment. The post graduate course has brought many photographers who wished to round out their practice; and, all in all, the School is enjoying one of the most successful seasons in its history.

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

SENSITIZING CARBON TISSUE.

In a studio the other day the talk turned to carbon printing and Mr. Oesting's article in the June issue. It seems that the article in question had revived the proprietor's interest in the work, and he had dug up some experimental prints made twelve or fourteen years ago, together with data made at the same time. One set of prints had been made to ascertain if the time of immersion in the sensitizer had the important bearing upon the subject that all the books indicated by giving the exact time of immersion in the bichromate solution. The results showed very plainly that degrees of partial saturation of the film, that is, varying short immersions, resulted in a slight variation in the speed of the tissue; and, of course, in the contrast obtained, up to an immersion of six minutes. After that period, which seemed to mark fairly closely the time necessary for complete saturation, absolute uniformity of resulting speed seemed to rule. Immersions of eight, twelve, sixteen, and twenty-four minutes appearing to cause not the slightest variation. Another set, made with varying strengths of sensitizing solution, had an entirely different story to tell. They showed on even gradation in degrees of contrast from the one sensitized in one-half of one per cent solution, up to a ten per cent solution; the latter being practically a saturated one. The weaker bath gave a slow tissue with increased contrast, while a strong solution gave high speed with attending degrees of softness according as the strength was increased. These experiments, according to the notes made at the time, confirmed the statements made by G. H. James in an article on carbon printing in "Amateur Photography" of London, in January, 1896. The notes explained that the samples had been sensitized and then squeegeed to ferrotype plates in accordance with a suggestion made in the same article. This last procedure facilitating the work and shortening the time; only about two hours being required for the tissue to become dry with a beautiful smooth surface, then to drop from the ferrotype plate. The procedure also avoided any danger from the deleterious action of impure air upon the wet tissue; and, by enclosing each ferrotype plate in a bag or envelope made of ruby paper, all danger of strong light reaching the tissue when it left the ferrotype plate was avoided as well. This allowed the worker to set the tissue-bearing plates in any convenient place where drying would take place rapidly, going back in a couple of hours and to the tissue ready for printing, with a fine, smooth surface that assured the best possible contact with the negative. All in all, it was agreed that the excellence of Mr. Oesting's plan could not be questioned on account of the time of immersion being disregarded, saturation of the tissue being practically achieved; while the quickness of drying, in a great measure due to the absence of moisture in the support, as would result from immersion, tended to better results; the quicker the drying of the tissue after sensitizing being universally acknowledged an important factor. However, it would seem that the plan put forward by Mr. James, that of keeping on hand stock solutions of the bichromate sensitizer varying in strength from one-half of one per cent to saturation, and using them according to the amount of contrast desired, is a most desirable method of procedure.

DETECTING INCORRECT EXPOSURE.

A correspondent asks how he can determine, at the earliest possible moment when developing, whether a plate is under or over exposed. The most simple method is to employ one developer until one is so thoroughly familiar with its action that any increase or decrease in

the time of first appearance of the image is at once noticeable. Then the rapidity with which the middle tones follow this first appearance of the high lights also assists; but this latter action is dependent upon the particular developer used, and its strength. With metol, for example, the middle tones follow the high lights so quickly that one accustomed to some other developer would at once suspect over-exposure.

COPPER-SILVER INTENSIFIER.

A correspondent asks for the old formula for a copper-silver intensifier that went the rounds of the photographic press some twelve years ago. Here is one that was published in a book of formulas dated 1895, and while we cannot vouch for it, having never tried it, it is no doubt the one wanted. If our correspondent can risk the peculiar susceptibility of silver nitrate solutions to form stains at unexpected times, the formula is worthy of trial as it gives exceptional density. It reads: Dissolve one-fourth ounce of copper sulphate in four ounces of hot, distilled water; dissolve a like amount of potassium bromide in a like amount of distilled water; and, when the first is cool, mix the two. Bleach the negative in this and then wash gently for only three or four minutes. Water allowed to flow rapidly over, or splash upon the negative, during this washing, will leave its mark when the silver is applied. The operation must be carried on in the darkroom and the silver solution kept from the light. After the washing prescribed, immerse in a five per cent solution of silver nitrate; distilled water being used for the latter as well. If still more strength is desired, rinse well and immerse in an ordinary developer. If too much strength results from the first or silver blackening, a short immersion in a clean hypo bath will reduce it. To cut down the effect of the second or developer blackening, use any regular reducer. A good wash must of course follow the use of the hypo bath.

PRINTING ON SILK.

A correspondent asks for a formula for printing on silk, but wants something that does not involve a dressing of gelatine or arrowroot to fill up the pores of the cloth. We doubt if prints made on silk, without some such facing to keep the image on the surface, will be satisfactory, but here is a formula, due to Opphofen, that appeared in the German magazines a number of years ago. First free the silk from dressing by well washing in warm water; then float for two minutes on a solution made up as follows:

Sodium chloride .....40 grains
Ammonium chloride ...40 grains
Water, distilled ..... 4 ounces
Ammonia, .880 .....60 minims

Hang up to dry by means of wooden clips. As long as it is only salted, it keeps well. For use, sensitize for two minutes in a bath of one hundred and fifty grains of silver nitrate to each ounce of distilled water. Dry in the dark. Print quite deeply and tone in the ordinary acetate bath. Fix, wash well, blot off with blotting paper and then dry. These prints on silk were originally intended to be colored by rubbing in crayon colors and fixing with ordinary fixatif, and this fact suggests that they may have been lacking in detail and brilliancy of their own. We would recommend that the silvering solution be applied with a tuft of cotton drawn into the end of a glass tube with a piece of string, applying it to the cloth tacked down on a piece of blotting paper on a board. This will be found more economical and the exact time is not important. Apply in one direction and then across, to be sure of even sensitizing.

"THE AGFA BOOK OF PHOTOGRAPHIC FORMULA."

This is a bulky little book of about one hundred and fifty pages, containing formulas for about everything that a photographer could wish to use, valuable tables, and a wealth of information, all in compact, yet full, form. Formulas are given for all the different plates and papers, tank development coming in for a good share of attention. As a formula book it is invaluable to the worker who desires to have all the best formulas together in convenient form. Blank pages are provided so that the worker can add any others which he may wish to keep in connection with those given. Do not neglect to write for a copy at once. Address, Berlin Aniline Works, 213 and 215 Water Street, New York.

International Photographic Association

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Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4954 Washington Ave., Chicago, Ill.

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NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smyth, 200 South Marion St., Denver, Colo.

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Wisconsin—H. Oliver Bodine. Racine.

NEW MEMBERS.

2500—B. P. Angle, Cowles, Neb.
4x5, 5x7 and post cards, developing paper, of miscellaneous outdoor work; for the same. Class 1.

2501—J. C. Bell, Trinidad, Colo.
Class 2.

2502—Marvin R. Neil, Ridott, Ill.
4x5, developing paper, of landscapes, snow scenes, and water scenes, for water, waterfalls, landscapes, nudes, and views of mountain life; for the same, on developing paper only. Class 1.

2503—L. W. Storm, Valdez, Alaska.
Class 2.

2504—Charles H. Swanson, Ft. Liscum, Alaska.
Class 2.

2505—Newton W. Emmens, Box 356, Trout Lake, B. C., Canada.
Class 2.

2506—Walter S. Snyder, 1211 W. Susquehanna Ave., Philadelphia, Pa.
5x7, various papers, of land and waterscapes, principal buildings, etc.; for the same.
Class 1.

2507—Miss Florence E. Hopewell, Tekamah, Nebr.
Class 2.

2508—Glenn Staley, Clear Lake, S. Dak.
5x7, printing-out paper, of views; for the same. Class 1.

2509—D. C. Davison, Texas City, Tex.
3¼x5½, developing paper, of general views; for post cards. Class 1.

2510—Carl H. Barton, Box 253, Paris, Tex.
3¼x5½, developing paper, of such few subjects as a small Texas town affords; for such subjects as freak and uncommon views. Class 1.

2511—J. E. Ender, 124 W. Lafayette St., Tampa, Fla.
Class 3.

2512—Mabel Douglass, 310 South Walnut St., Iola, Kans.
4x5 and bromide enlargements to 10x12, developing paper, of home portraits, animals and views, for the same. Class 1.

2513—John Beck.
3¼x5½, post card size, developing paper, of general subjects, for the same. Class 1.

2514—Avery Walter, Sears, Mich.
4x5, developing and printing-out papers, of landscapes, views and home portraits; for landscapes and views, post cards only. Class 1.

2515—W. E. Fisher, 338 Edmond St., Pittsburg, Pa.
Class 2.

2516—Mrs. W. A. Bexley, Hobe Sound, Fla.
Class 2.

2517—Eugene A. Lewis, R. F. D. No. 1, Kittery Depot, Maine.
3¼x5½; for pictures of historical interest, animals, views, etc. in post cards. Class 1.

2518X—P. E. Hixon, Fredonia, Kan.
Post cards, various papers, of general landscapes, etc., for the same. Class 1.

2519—J. Clarence Norton, R. F. D. No. 2, Moran, Kan.
4x5, developing paper, of prairie farm scenes and animals; for anything of interest; post cards only. Class 1.

2520—W. C. Ahrens, Box 805, Tucson, Ariz.
Class 2.

RENEWALS.

1413—Walter V. Overman, 1935 North C St., Elwood, Ind.
Stereoscopic views of general outdoor subjects, for the same. Class 1, except United States and Canada, Class 2. Foreign exchanges especially desired; good work only.

1928—De Lancy Cossett, R. F. D. No. 1, Box 44, Wilmington, Ill.
4x5, and post cards, developing paper, of landscapes, river scenery, camp life, and street scenes; for like subjects or anything of interest. Class 1.

2077X—W. G. Richter, 400 Goshen Ave., Elkhart, Ind.
Has lost his records, but will repay any cards owed if notified.

2272X—O. F. Jordan, Evanston, Ill.
Class 1.

2422—S. O. Barnum, Shinglehouse, Pa.
4x5 and up to 16x20, developing paper, of landscapes, colored in oil or pastel, genre subjects, and general pictorial work; for general pictorial work either in monochrome or color. Class 1.

2433—Clifford Kirk, Kincardine, Ont., Canada.
In addition to the work mentioned in his notice in the May issue, he has 5x7 portraits of studio work, also 3¼x5½ views and portraits. Class 1.

2472X—Frank M. Weaver, R. F. D. No. 1, Box 79, Junction City, Wis.
Post cards. Class 1.

2492—J. T. Miller, R. F. D. No. 1, Murat, Va.
4x5 to 8x10, of portraits and views, such as scenery and public buildings; for the same in post cards and stereoscopic views, Class 1.

CHANGES OF ADDRESS.

1750X—Felipe Floresll, Apartado No. 8, Zitacuaro, Mich., Mexico.
(Was Patzcuaro, Mich., Mexico.) Unable to exchange at present. Will give notice when ready to do so.

1847—R. S. Gallie, Box 449, Little Rock, Ark.
(Was Box 68.)

1864—A. G. Lindgren, Hasty, Minn.
(Was Verndale, Minn.)

1935—Emory W. Ross, Eureka, Ill.
(Was Edwards, Miss.)

2059X—Don Campbell, Lock Box 381, Ashland, Ore.
(Was Hilt, Cal.)

2100—Mrs. R. E. Pennington, R. F. D. No. 3, Box 386, North Yakima, Wash.
(Was Naches, Wash.)

2134X—Joseph R. Poole, 162 Shawmut St., Chelsea, Mass.
(Was Holbrook, Mass.)

2176—Phil A. Friedell, Box 44, Victor, Mont.
(Was Drummond, Mont.)

2278—L. I. Neikirk, 933 Portland Place, Boulder, Colo.
(Was Urbana, Ill.)

2283—Oscar E. Scholen, R. F. D. No. 1, Woodinville, Wash.
(Was Port Townsend, Wash.)

2373—Mrs. George Nichols, 132 W 18th St., Los Angeles, Cal.
(Was Dinuba, Cal.)

2417—Frieda Sutherland, care Hart Photo Studio, Minot, N. D.
(Was Box 157, Fergus Falls, Minn.)

2445—James E. Mead, care Mead Cycle Co., 35 Wapping, Liverpool, England.
(Was Chicago, Ill.)

2457—John S. Shahan, Attalla, Ala.
(Was Marion, Ala.)

2483—Oliver Frantz, Loveland, Colo.
(Was Platteville, Colo.)

WITHDRAWALS.

2253—Mrs. Wm. E. Knowles, Fridley, Mont.
On account of lack of time.

2448—M. Crumb, Hospital Corps, U. S. A., Fort Worden, Wash.
An accident destroyed such a large percentage of his negatives that it will be three or four months before he is able to again take up exchanging, at which time a new notice will be given.

Club News and Notes

DETROIT CAMERA CLUB.

An exhibition of the prints entered for the June competition was held by the Detroit Camera Club, June seventh, at their club rooms. Mr. Wheatley, an artist having years of experience, criticised and judged the prints. The subjects named for this competition were marines, and landscapes with figures. "Moonlight," by J. E. Scott, was given first award, and "Sailing," by W. B. Wilcox, took the second. These two pictures will be properly labeled and hung in the club rooms. A monthly competition is held each month by the Club. All prints entered therein are exhibited for a short time and then awards made by a competent judge. The club is enjoying its new quarters at 6 Adams Avenue West. They overlook the Grand Circus Park, and, on that account, the members like to visit them, even when not photographically inclined.

C. J. SCHAUER, Secretary.

CHICAGO CAMERA CLUB.

At the annual meeting of this club, held at the club rooms June second, about twenty-five members being present, the following officers were elected for the ensuing year: President, George C. McKee; Vice-President, C. B. Hale; Secretary-Treasurer, H. A. Langston (re-elected), and Directors, E. F. Oyster, H. H. Hyde, F. M. Tuckerman, and W. F. Willis. The position of Assistant Secretary-Treasurer was also created, and G. Sohn appointed thereto. The annual report of the Secretary-Treasurer showed the affairs of the club to be in prosperous condition. A number of improvements have recently been made, among them being the installation of an autochrome room and a Cooper-Hewitt light for portraiture. During the summer months a school of photography will be established.

H. A. LANGSTON, Secretary.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

SOME FINE PHOTO JEWELRY.

We have recently had the pleasure of seeing a catalogue and samples of the work turned out by Julius Schloss & Company, Frankfort a Main 47, Germany, manufacturers of photo jewelry, that is, jewelry with their semi or real enamel miniatures. The work is very fine, particularly the colored miniatures. The goods are such that any professional should be able to add considerable to his income by showing a few samples to his customers. A handsome catalogue is furnished, and we would advise all our readers to send for a copy. See their advertisement on another page, and send for the particular catalogue you desire. The one we have seen contains one hundred and twenty pages, and must contain about six times as many illustrations.

MAKING BETTER PICTURES.

This is the title of an interesting little booklet issued by George C. Elmberger, Jefferson Park, Chicago, in which he describes his specialties for the oil, bromoil, gum, and kallitype processes, and also a number of other products which appeal to the pictorialist. If you have ambition to make better pictures, send for a copy of this booklet immediately. If you enclose four cents in stamps and mention "Camera Craft," he will also send you a trial tube of lustralene, a preparation which will greatly improve your flat, lifeless prints. Address as above.

A FINE CATALOGUE.

The Bausch & Lomb new photographic catalogue which has just reached us is the handsomest one thus far issued by that company, and their publications are all of a high order of merit. The cover is a pleasing design, representing a conventionalized landscape seen through a window. The colors are quiet and harmonious, and the book is artistic, as is befitting a photographic catalogue exploiting only the highest grade lenses and accessories. The careful and consistent plan upon which it has been built has been so well carried out as to confer credit alike upon authors and printers. It is profusely illustrated with fine half-tone engravings of subjects of the most varied kinds which will appeal to all interests. An historical sketch of lenses, a glossary of photographic terms, tables showing Angle of View, depth of Focus, Exposure and Shutter Speeds, make the book unusually valuable.

Bausch & Lomb would like to place a copy of this new catalogue in the hands of every person interested in high grade photographic equipments, and to this end invite requests. It can also be procured from photographic dealers.

THE 1910 KODAK BOOK.

Just too late for our last issue came the new Kodak list for 1910. As usual, it is a beautiful piece of work, interesting in itself, despite the fact that it records all the new features of the Kodak line. The Kodak Ball Bearing shutter comes in for description, and the combination back with focusing screen for the 3A model should not be overlooked. The Speed Kodak is another model that should have the attention of the worker desiring an equipment that will be equal to any emergency. All the dealers have this new list, and it is sent free on request by the Eastman Kodak Company, Rochester, New York.

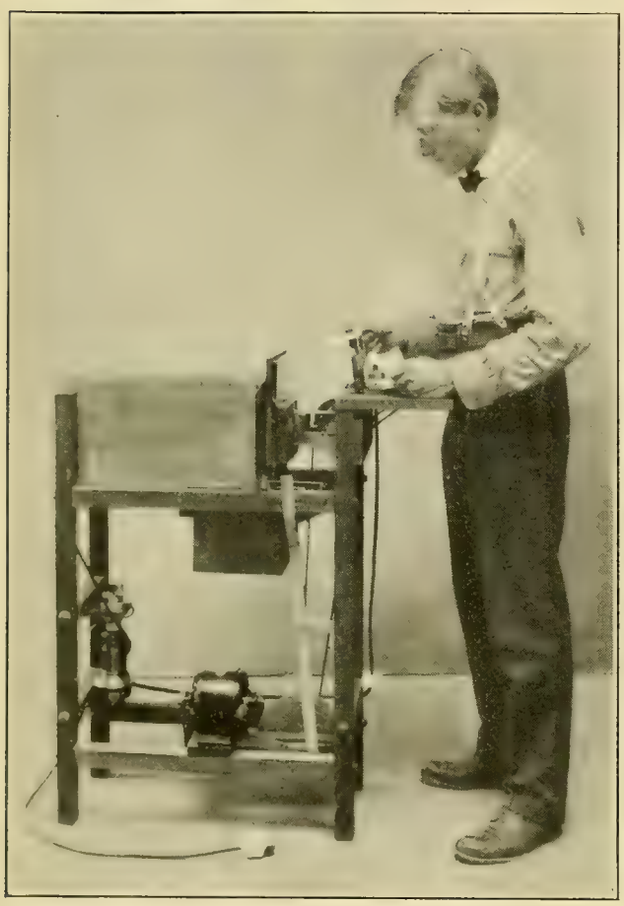
BARNET PLATES KEEP WELL.

March 14, 1910.

Elliott & Sons, Limited,
Barnet, Herts, England.

Dear Sirs: We enclose herewith a print from negative taken in the Haymarket today by our Mr. Sinclair, and it will be of interest to your firm. The plate is from batch No. 2401, and was supplied for the Southern Cross Antarctic Expedition, which was fitted out by Sir George Newnes, Bart., in 1898. These plates were left in the Antarctic by Mr. Louis Bernacchi, F.R.G.S., and were found by him during the voyage of the "Discovery" under Capt. Scott, R.N. These plates were handed to us by Mr.

paper is three seconds. As the operator has nothing to do after the correct time has been determined but feed the paper into spring fingers, the feeding can be done by a boy or girl just as well as by the most expert photographer. The negative stands in a vertical position in the machine, and prints drop from it, by gravity, into a drawer beneath, the paper being handled but once prior to development. Provision is made for the rapid changing of negatives,



THE DYE PRINTER IN OPERATION

also for vignetting and doctoring; all of which can be done to much better advantage and more quickly than with an ordinary printing-frame. This makes it handier for the portrait man who wants but a dozen or half dozen prints from a negative, to use this machine than to follow old methods; with the further advantage that the prints will be absolutely uniform. The illustration shows the machine as in use, one exposure being made and the next piece of paper or card being placed in the feeding fingers ready to follow the dropping of the first piece from the negative.

The machine is portable, self-contained, and requires no extra electric wiring or work to install it. Connecting cord and plug are

Bernacchi on the return of Capt. Scott's expedition, and were mislaid until today, when we tried them, with the enclosed results. Notwithstanding that they are twelve years old, and have made two journeys through the tropics, and been kept for a prolonged period in the Antarctic at a temperature sometimes as low as 40° F., all but the extreme edges are in perfect condition.

Yours faithfully,
JAMES A. SINCLAIR & CO., Ltd.;
(Signed) Jas. A. Sinclair.

"MODERN TELEPHOTOGRAPHY."

This is a handsome, well illustrated, well printed book, just out. It is by that authoritative writer on the subject, Captain Owen Wheeler, editor of the "Telephoto Quarterly," and this statement leaves little to be said as to the informative quality of the text and illustrations. The subject, one can well understand, is as near exhausted as is possible to make it at the present time. The book will be sent postpaid, paper covers, seventy-five cents; canvas edition, one dollar and twenty-five cents; by the American agents, George Murphy, Incorporated, 59 East Ninth Street, New York.

AN ANNOUNCEMENT.

The Northern Photo Supply Co., of Minneapolis, announce that they have purchased the entire stock and business of the branch house at Fargo, North Dakota, heretofore owned by the Multiscope & Film Co., of Burlington, Wisconsin. This branch will remain under the management of E.W. Schultz, as heretofore, and the firm's Minneapolis office will, of course, remain as heretofore. Every effort will be made to have the Fargo branch so well equipped and prompt in service as to earn for it the same high reputation that the Minneapolis store enjoys.

THE DYE PRINTING MACHINE.

Herewith we show an illustration of a printing machine that the G. M. Dye Printing Machine Company, Lamar, Colorado, will have ready for delivery July first. It will be on exhibition at the National Convention, competing for the prize for the best invention of a photographic utility. The capacity of the machine on straight printing from one negative, either paper or post cards, is one thousand two hundred prints per hour. In other words, for average negatives the time to print and change

furnished, and the machine can be used in any room where there is an ordinary incandescent lamp-socket. As will be seen from the illustration, the machine is run by a small motor. The lamp used is a Nernst Glower. The light-chamber is the oblong box, made long enough to allow of the light being moved nearer to or further from the negative. The latter is held at the front end of the light-chamber by a special clamping device. The box tilts to the rear to bring negative in a horizontal position for changing, and the lid in the box gives access to the interior, where grooves are provided next the negative, for the introduction of vignetting cards, ground-glass retarding sheets, and other methods of control. The timing is done by the motor, and as both motor and lamp are in the same circuit, any fluctuations in current will affect both alike. If light grows brighter or dimmer, the motor will run faster or slower, and equalize the time of printing.

A NEW TRIPOD.

We have recently had the pleasure of examining one of the new and improved "Quick-Set Metal Tripods," at one of the local dealers. To say that it at once recommends itself is describing it only in a very superficial manner. The ease with which it can be extended, or closed up for carrying, is, of course, the principal feature. In addition, it is very compact, despite the rigidity which its construction assures. There are no buttons or pins to get out of order and cause trouble. It is advertised on another page this month, and we would recommend its being given full attention by those desiring the last word in a rigid, compact, and quickly set up tripod. It is sold by George Murphy, Incorporated, 59 East Ninth Street, New York. Write them for a circular, or send ten cents for their new three-hundred page catalogue.

"HOW AND WHY IN PHOTOGRAPHY."

The above is the title of a handsome compilation of informative matter that will prove of the highest interest to all our readers, both professional and amateur. Just as a sample, it contains full instructions for making these firelight effects that are found so interesting by many photographers in both ranks; line drawings explaining the method fully, together with reproductions of examples in colors. The booklet is published by Burroughs, Wellcome & Co., and they advise that they will gladly send a sample free to any of our readers who will write for it. The address of the United States depot is: Burroughs, Wellcome & Co., 35 to 39 West Thirty-third Street, New York.

AUTOTYPE CARBON TISSUES.

The permanency of Carbon, the power to produce all that the negative shows, the new increased range of tints, the various means at hand to use Carbon Tissue on any negative, is slowly but gradually bringing the use of Carbon into all branches of photography. For transparencies, lantern slides, porcelain and ground-glass pictures, photogravures, ceramic photography and, above all, for landscapes, portraits, and miniature portraits, Carbon is supreme. For the new oil process the transfer papers offered by the Autotype Carbon Company have given the best results. George Murphy, Incorporated, 59 East Ninth Street, New York, are American agents.

A BEAUTIFUL STUDIO.

For some time the photographic studio of W. J. Collins has been undergoing repairs, and the inside has been redecorated. No money or pains has been spared to fit up the rooms artistically, and the effect is wonderfully pleasing. The walls are covered with specimen work, and to complete the good effect, he has put new pictures in the cases outside. Mr. Collins is an artist in a thousand, and Rapid City is fortunate in having such an one in her midst.—Rapid City (South Dakota) Journal.

ANNUAL MEETING, AMERICAN FEDERATION.

The annual meeting of the American Federation of Photographic Societies was held on Saturday, May seventh, 1910, at the Museum of Art, Toledo, Ohio. The meeting was well attended, and the delegates were highly pleased with the success of the Sixth Salon and the conduct of the affairs of the Federation during the past year. All expenses were met and a substantial balance remains in the hands of the treasurer. It was decided to eliminate all foreign exhibits from the Seventh Salon and make it purely American, as the name implies. The number of frames hung will not exceed two hundred, and the standard will be raised to meet the standards of the highest art critics.

Desiring the support of all photographic journals equally, it was decided not to designate any one publication as the official organ. Hereafter all work submitted for the jury must be sent framed, except from points west of Denver. The Hanging Committee will frame Western prints economically at the cost of the entrant.

The following officers were re-elected: George W. Stevens, President; John F. Jones, Vice-President; George W. Beatty, Treasurer; and C. C. Taylor, Secretary, all of Toledo. William A. Rheinheimer, of St. Louis, was also re-elected Historian.

SOME FINE PORTRAIT WORK.

Just recently there has reached our desk some very fine examples of portraiture from the studio of Moyemont, of La Junta, Colorado. The brilliancy, combined with fine modeling and delicate texture, make these examples exceptionally pleasing. They were made with Rodenstock's "Eurynar," Series IV, No. 6, sold in this country by James Frank & Son, Broad Street, Augusta, Georgia. Any of our readers interested in fine lenses of the anastigmat type, particularly at a reasonable price, should get a catalogue of the above named American agents. Mr. Moyement's work is certainly very fine, with his new equipment being even better than the work which earned him such an enviable reputation in Milwaukee before he removd to Colorado.

AN IMPORTANT CHANGE.

The Multiscope & Film Company, for so long at Burlington, Wisconsin, wish to advise their customers that they have changed the name to the Partee Photo Supply Company; and, owing to their rapid growth, they desire, if such be possible, to give their customers better service, and have, therefore, moved their business to Chicago, locating at 1223, 25 and 27 Wabash Avenue. They wish to add that their new quarters will be filled with a fresh and complete up-to-date stock of all photographic supplies, and that they will continue to manufacture their famous Al-Vista cameras. One of these Al-Vista cameras was purchased by the Smithsonian Institute for the Roosevelt expedition in Africa and was used with great success on this trip. To show how widely distributed this camera has become, the firm recently received a letter from the chief engineer of the Siberia Railroad, asking them to send him one of their Al-Vista Cameras, as he had recently seen one of these cameras used on the headwaters of the Amazon in South America, and was very much pleased with the work it did.

BROMIDE ENLARGING.

A branch of photography that has proven itself most profitable, both to the portrait and commercial worker, is bromide enlarging. Many studios that find business falling off with the wane of seasons, take the opportunity, during these dull periods, of offering special inducements to the public in order to get sittings, thereby distributing the work more evenly over the year. A bromide enlargement is one of the most effective as well as the most economical premiums to offer; its apparent value being great to the prospective customer, while its cost is comparatively small. A prominent worker in a small Western town offered, to persons having sittings before a certain date, two fourteen-inch sepia enlargements and ten of his regular cabinet prints, at the customary dozen price. This method of advertising proved a great success and has the hearty endorsement of the photographer in question. The growth of this business and the development of the specialist have demonstrated that he can do the work cheaper and better than the operator who makes only an occasional enlargement. The expert, working all day and every day under constant light conditions, will make a better enlargement at the first trial than the less experienced operator after several trials, and without the latter's consequent loss of time and material. Again, the specialist employs time-saving arrangements that are not possible in the small plant; and, in connection with his greater skill, the certainty of correct exposure, and the small waste, he is able to make and sell enlargements at a price that is lower than the actual cost of production in the average studio or workroom. The Photo Craft Shop of San Francisco is a leading house in this line and has assisted materially in introducing and developing this branch of photography. Their experience along these lines is at your disposal for the asking. You should at least procure a copy of their price list and discounts; a post card bringing them.

Vol. XVII No. 8 AUGUST, 1910 Price, 10 Cen

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San Francisco, California

Answering Three Vital Questions

THE most prominent photographer in Chicago after trying one full gross of 14 x 17

Professional Cyko

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"Now that I am satisfied with your emulsion and your raw stock I will ask you three questions:

Is your emulsion always the same?

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Is your plant large enough to cope with the growing demand?"

To these three questions a representative of Cyko can answer "Yes" with the knowledge that his answer will be echoed by thousands of photographers who have used Cyko and by every independent dealer who has sold it for the last *ten years*.

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A HOME PORTRAIT
By JARVIS & WESTMAN

PUBLIC LIBRARY

Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

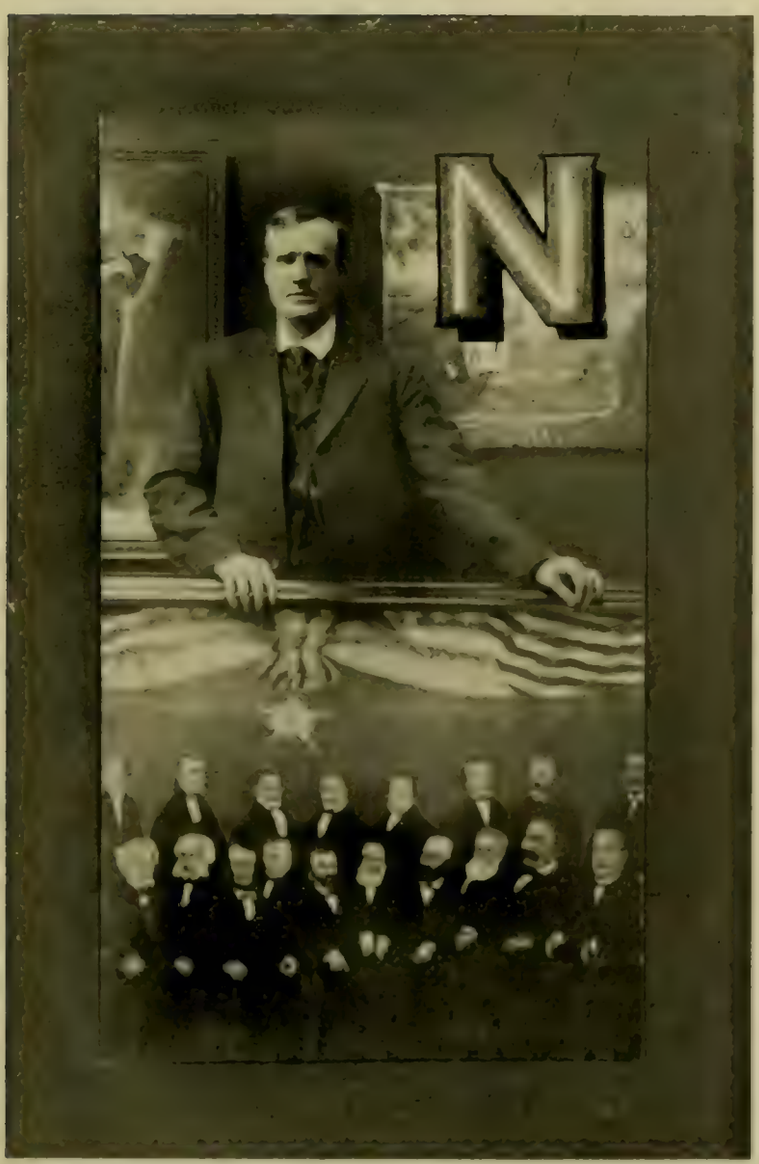
CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, AUGUST, 1910. No. 8

My Movable Studios

By Otto Stromberg

With Illustrations by the Author



THE AUTHOR AND A PORTION OF THE PAINTING MENTIONED

NEMESIS, in the form of the editor, has insisted that I am just the one he wants to write concerning movable studios because I have had the actual experience. This explanation at once places the blame where it belongs; and, if the reader is disappointed in my story, he can feel assured that I have only succumbed to the editor's irresistible appeals.

Some little experience with a kodak inspired me with the idea that a photographic business would be both congenial and profitable; so, when a tent studio, that had been occupied by a photographer who had established in my town, was offered for sale, I became a willing buyer. It had been made to order by a firm of tent-makers in Aberdeen, 16x18 feet in size, and cost twenty-four dollars. With it I failed to get good results; it blew down three times in the one season, finally being wrecked

beyond repair. I discovered later that the poor work was the result of my ignorance and the use of poor instruments. The lens, which had been sold me as a valuable one at a bargain for forty-five dollars, proved to be one that the dealers listed at twenty. I was allowed fifteen dollars for it in trade by a dealer, and secured a better one. I believe a tent would be all right in a country where winds were not too strong, as the lighting is the same as with my canvas car, subdued with transparent shadows. With either you cannot very well get strong contrast, line lighting, or what is called Rembrandt lighting; but such effects are rarely called for except in the larger towns.

The result of my second effort was built on the ground with the intention of putting it on trucks later, as I wanted to move it to another town. I obtained the design from a dealer in photographic supplies. It was nine feet wide, twenty-four feet long, and seven feet to the eaves. The rafters being five and a half feet long made the peak of the roof ten feet from the floor, or three feet higher than the eaves. There were two skylights, one on each side, 4½x5, raised slightly above the roof. Two were advised, as one was not sufficient for large groups. Ordinarily, one was kept covered with dark curtains inside. Their exposed position made it hard to keep out the sunlight. With it I could secure fairly good lightings. The lumber bill was fifty-five dollars, and carpenter work and other material brought the cost up to about a hundred, not counting my own work. But when the lot on which I was located was sold, and I had to vacate, I found the car was too heavy to put on trucks. It would have taken at least four horses to move it over a good road, so I bought a vacant lot and staked it thereon. The town being a small one, incapable of supporting a gallery in constant operation, I had, in the meanwhile, closed up and taken a three months' course at a photographic school in the East, thereby improving my work quite materially.

The surrounding country being good for viewing and miscellaneous work, with several nearby towns of like size without photographers, I decided to make the car studio larger and a permanent fixture on the lot which I had bought. I took off the roof, made the walls two feet higher all around, and then sawed the whole thing in two, cutting through sills and all. The two halves, 9x12, were then enlarged to 12x12, making one room 12x24. An addition of like size was built on, divided into two 12x12 rooms, giving me a square box, 24x24. In putting on the roof, I inclined the two gables about six feet, making the peak only twelve feet long. On the north side of the roof I let in the two 4½x5 lights that had been in the original structure, giving me a skylight 4½x10, starting a little above the eaves, making the bottom ten feet and the top seventeen feet from the floor. The side-light was the same size as in the original, but I added two more feet to correspond to the added height of the rebuilt structure. Do what I would good lightings could not be secured; the skylight was too narrow, and customers found fault with contrasty results and their lack of detail in the shadows. I did the best I could by using a large, white reflector; discarded my second lens and camera and replaced them with a new box and a 2B

Dallmeyer for portraits and a Voigtlander Euryscope for groups and view work. I could not enlarge the skylight without incurring considerable expense and almost wrecking the building. Local business had become quite light and I often closed up and took my camera over to one of the other towns and made sittings in the hotel, and even in the school house, the latter being vacant during the summer months. I found this inconvenient and unprofitable, and also discovered that the building would bring a good rental as a dwelling. I therefore removed the skylights, which I could never keep from leaking, shingled over the opening, and rented it out for a dwelling; doing outdoor work and viewing until winter set in, when I took a position as school teacher until spring. During spare time and evenings I studied over the question of a really portable studio. To make a success of a photographic business in these small towns, a portable gallery is the only solution. If one remains in the same town permanently, he soon runs out of customers. One does a good business at first, but shortly the demand becomes filled. Sometimes it is possible to awaken interest and create a demand by something that will cause them to visit the studio, if for no other reason than mere curiosity. Last summer I entered an oil painting at the State Fair and the judges gave me a small cash premium, more out of sympathy than anything else. The letter which they sent me I had the editor of the local paper read, and he published it, together with an announcement that it could be seen at my gallery. Scores of people who visited me to see the painting examined my samples, and many of them ordered pictures. But rush business lasts but about a month; profitable business a few weeks longer. You are hailed on the street as a good fellow; they all talk pictures to you, but the arrangements for sitting are for some indefinite date in the future. No one comes to the gallery, and business is as dead as the proverbial "door-nail." Here is where the portable studio has the advantage: you can advertise that you are moving on a certain date, and this will stimulate business for another month or six weeks.

I thought of using one of the cook cars that are hauled around with a thresher outfit, but they are only about 9x18. A team of horses pulls them easily when they are not coupled onto the thresher engine in moving. But they are too low and short. Then I debated the advisability of adding a canvas extension to one, making it about six feet longer. But the price of the cars, even second-hand, was over a hundred dollars, and I hated to use a patched-up affair. However, this gave me the idea of building a studio on wheels, with a floor and frame of wood, but covered entirely with canvas. The running gear being the first consideration, I found four old, uncracked mower wheels in a scrap heap, and bought them for two dollars and a half. While the size is just right and the wide tread with cleats to prevent their slipping makes them specially suited, they are made of cast iron, and crack easily if run against a rock in the road, particularly with a heavy load. I would advise the buying of a set of steel trucks such as the catalogue houses list at ten dollars. I would add that the blacksmith who sold me the four wheels made me two axles out of round iron about one and one-fourth inches in diameter. They were of the same length, with an iron collar

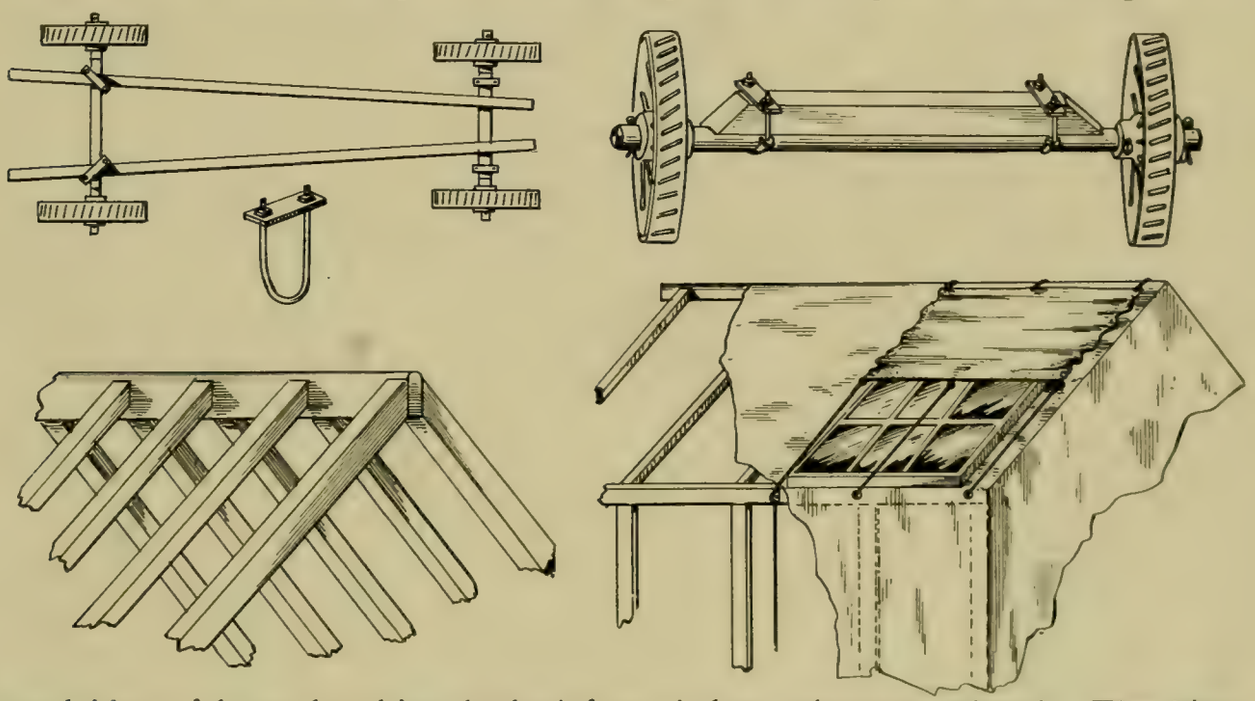
slipped on each end and fastened with a set screw, to form a hub, the extreme end being drilled for the insertion of a spring cotter to hold the wheels from slipping off, as shown in sketch. A square piece of iron turned down at the ends, with the collars welded on and the ends threaded for a large nut and washer, would have been better, but much more expensive. I thought of cutting down some old wagon wheels, but they would have had too narrow a tread, sinking into the ground and pulling too heavily.

Then I fastened two pieces of timber, 4x6, onto the axles by means of heavy iron straps, see sketch herewith, drawing the straps up tight with nuts on top to prevent the axle from turning. I rolled these two sets of wheels on their axles around to the blacksmith shop and tried to explain to the carpenter and the blacksmith what I wanted, but both explained that they had all the work they could do for the next six weeks. However, they graciously permitted me to lay the wheels out in front of their shop, lent me all the tools I wanted, and donated an unlimited amount of advice. The wheels were five and one-half feet apart, and on the axles, already strengthened with the wooden timbers, I placed two stringers, 2x8 and twenty-four feet long. The stringers extended back over rear axle six feet, and forward over the front axle two feet. At the back the ends were four and a half feet apart, and two feet at the front. This left a little less than sixteen feet between axles. The stringers were placed across axles, as shown, in order that the front wheels cleared them in turning; 2x10 would have been better for the stringers, as the wheels are inclined to cut them and bind in turning, particularly if the car is not on a perfectly level road.

SPECIMENS OF EVERYDAY WORK

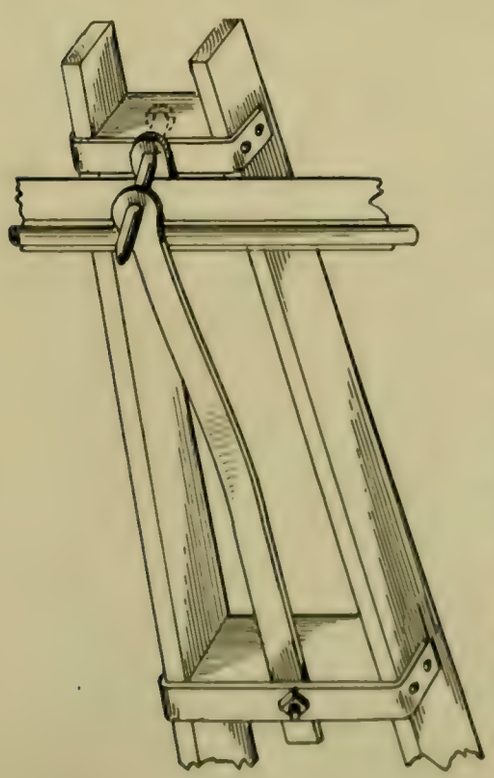
About five feet back of the front axle I bolted on a cross bar with the ends turned up outside of the stringers, and between nailed in a piece of the 2x6 lumber, first notching it out to take the strip of similar iron running

from its center to just in front of the axle, where it terminated in a hole to receive the king bolt. The rear end of this last piece was bolted to the center of the cross piece. To the top of the axle I bolted another piece of iron with a hole the same size coming directly over the one just mentioned. Directly over these holes another iron cross piece was put in with a block above and a hole bored through both, or, rather, through the wood to meet one made in the cross piece bolted in place. The plan herewith gives a



good idea of how the thing looked from below when completed. The king bolt was about an inch or a little more in diameter.

The next thing was to put on the sills. There were twelve of them, 2x4, and they came a little over twenty-six inches apart. Each one was notched out on top and strapped to the stringers with U clamps, straps, and nuts made similar to one shown in the sketch. I had to bend twenty-four clamps out of half-inch round iron, thread the ends, and bore forty-eight holes, one in each end of the twenty-four straps, and do it all by hand. It was a tedious job. The floor went on next. Then I ripped a lot of the 2x4 in two, cut them seven feet long, laid them out on the ground, and spiked a plate to the tops and bottoms, just as in building a house. The four end uprights forming the corners were full 2x4 for strength. To hold these sections of side framing in place, I nailed a piece of 1x4 lumber from the top of every other upright across its duplicate on the other side, doing this, of course, after putting them in place and nailing the lower plates to the floor. The rafters were the same as the uprights, 2x4, except at the corners, where they were 4x4. I had a good carpenter cut these so that they would be a



snug and even fit. Instead of coming together at the top, they met there with a 1x4 board between. This board was about a half inch above the rafters and rounded off so as not to cut the canvas to be put on afterwards. This is also shown. Rafters were about six feet long.

The canvas covering then followed. The material is twenty-nine inches wide, and this gives a lap of one and a half inches on each of the rafters and uprights. I purchased the eight-ounce weight, but regretted not having bought the twelve. I oiled it with raw linseed oil to make it waterproof, confining this to the roof and that part of the wall next to dark room. It should all have been oiled, but I ordered a five-gallon can, and it only went that far. Starting at the floor on one side, the canvas was run up over peak and down on the other side, and cut off at the floor. I pulled it tight and tacked it temporarily. Afterward, when all was covered and made smooth, thin strips of batten, laths ripped in two, were placed along all the sidings and rafters where the canvas lapped, and nailed down with shingle nails. At the proper place, I put in one of the old skylights, 4½x5 feet, but no side-light. A supplementary rafter had to be put in to meet one side of this sash, but that was not difficult. The roof should be made double by tacking another covering of the canvas to the rafters inside. This would make it cooler in summer and warmer in winter. Mine got very hot in summer, and I partially remedied this by loosening the canvas at both sides, turning it up and allowing a circulation of air through from side to side. One hundred and fifty yards of canvas were required to cover the frame.

I had a carpenter make me a tongue, similar to the strong ones used on heavy wagons. It carried two eye bolts that hooked into two others fastened to the wooden portion of the front axle, and it is but the work of a moment to hook it on or take it off. When not being moved about, I have a small platform that bolts on to the front ends of the stringer and then hook on a set of three steps. A stout stake or small post is sunk in the ground at each corner and nailed to the end sills to give the car stability when being used. To give the walls added strength, I ran rods of half-inch round iron from about two feet below the tops of the corner uprights, diagonally downward along both walls to the bottom plate, fastening them at both ends with small wood screws. There were eight of these, seven feet long, with eyes bent in each end to take the wood screws. The cost of the car was as follows: Lumber, thirty dollars; canvas, fifteen; carpenter work, fifteen; blacksmithing and iron, ten; tongue, three and a half; wheels and axles, two and a half; linseed oil and other incidentals, say, five; making the entire cost, with my own labor, eighty-one dollars. The skylight I had from the old gallery.

The dark room was made fifty-two inches deep and thirty-six inches wide. The 2x2 stuff was run from the floor right up to the rafters, covered with heavy felt paper such as is used under carpets, before the canvas was put on. Then I lined it with red building paper. The top was made level with the top plate along top of side studding, and made the same as the sides. A ruby glass was put in the side facing out and covered with canvas when the frame was covered. When all was done, a curtain was put on to

cover the skylight, as in illustration, which also shows the arrangement of the three-eighths inch ropes that move it from the inside. There are three ropes, twenty-six feet long. Each one starts at the floor, goes up inside canvas through a pulley fastened to under side of siding plate, then out through hole in canvas up over plate to a ring in lower end of curtain, thence up over ridge on outside, and down through another hole on other side, through another pulley on inside, and again to floor on opposite side from where it started. These allow the curtain to be raised or lowered from the inside.

THE PORTABLE STUDIO; THE OLDER, REMODELED BUILDING IN THE REAR

Two or three examples of my every-day work are sent with this article. It will be noticed that the large group has a rather intense lighting. A translucent curtain inside skylight would have remedied this. Being all ready to leave for Europe in two days, there are only these few examples ready at hand, but I believe they demonstrate that a car such as I have tried to describe is practical and convenient. The canvas gives a soft, diffused light over an entire group or single figure, while the high lights can be secured wherever wanted with the skylight. Those who found fault with my pictures before now praise them for their softness and the transparency and detail in the shadows.

Art—What Is It?

Art is a jealous mistress.—Emerson.

A picture is a poem without words.—Horace.

Art is art precisely because it is not nature.—Goethe.

Nature must be the groundwork of wit and art.—John Selden.

Painting is silent poetry, and poetry speaking is painting.—Simonides.

Thought is the unseen nature, as nature is the unseen thought.—Heine.

Painting is the intermediate something between a thought and a thing.—Coleridge.

Painting does not proceed so much by intelligence as by sight and feeling and invention.—Hamerton.

The conscious utterance of thought by speech or action to any end is art.—Emerson.

Making Women Look Pretty in Their Photographs

By Clarence F. Ray

Our Prize Article for August, Winning a Wold Air Brush

The four portraits reproduced with this article are not just such as would best suit the points brought out in the text, but they are far from being inconsistent in connection therewith. The first or smaller one is an ordinary portrait made of the subject, just as she came in for a sitting, and was entirely satisfactory. The other three studies of the same subject were made by Mr. Ray, in order to demonstrate what could be done by employing some skill, and that appreciation of the possibilities resulting from study and application. Our request for a few examples of his work to use with the article had reached him that morning, and he felt that something of this kind would be more instructive than anything selected at random. We feel that our readers will agree with him quite fully.

The photographer who secures a reputation for making beautiful pictures of pretty women and pretty pictures of plain women doesn't have to worry about poor business. It is a form of flattery that they will all accept; and, in return, work for your interests to an extent that will make you prosperous if the business is rightly handled. The photographer who is content to photograph them as they come to the studio, either in street dress or unsuitable and unbecoming light clothes, will complain that people only want cheap pictures nowadays, and make post cards, ping-pongs, etc. But he is all wrong; the ladies will pay well to get stunning pictures, pictures that have been caught in that rare moment when milady is looking her best. The first duty of an artist is not to portray her realistically, but idealistically. Our great painters have established a precedent along this line, and one that we cannot disregard. They carried the matter much further than we could even dare to do, did our art permit. Realize this fact, employ a little tact and skill, together with such artistic perception as you may have or acquire, and success is yours.

Start right by putting out only pictures of pretty women, and don't wait for them to happen in; write them inviting them to call and pose for you. They will usually buy pictures; and, should they not, it is well worth the small expense to have pretty pictures as trade pullers. Study the matter and learn what costumes and arrangement of hair produce the most becoming effects for different types. And above all, talk it over with them before they come for the sitting. After they reach the studio it is often too late and a protest simply dissatisfies, particularly if an outfit has been brought along. Tell them that something else would look better in the picture, and they feel that they will not be pleased. When they first call to examine your work and inquire as to prices, talk about the best things to wear, then and there; do not wait for them to ask. Tell them to avoid mannish costumes, dark colors, and even tailor-made costumes, when they have light-colored dresses. Soft, fluffy effects in light colors that take almost white are the best.

Most women look best in low neck if their necks are not too long or bony; if they have a nice, light-colored evening dress, have them wear it. Keep at hand two or three yards of pink Japanese silk to drape around

THE REGULAR THING

arranging the train as advised. One knee is brought directly in front of the other, thereby giving a graceful slope from hips to feet.

There are various expedients for inducing the fleeting expression, coy, pensive, scornful or ecstatic, which typify a woman when the spirit of beauty is strongest upon her, but the one I use most is to flattery. I try, if I find it is not objectionable, to keep up a running fire of light conversation all the time I am taking their picture. Photographers should cultivate the habit of engaging their subjects in conversation of pleasing nature—make their faces light up, catch them just after a smile, as it leaves a pleased expression in the eyes. I am usually able to meet customers while they are looking at pictures and arrang-

shoulders if nothing better is available from the sitter's own wardrobe. Learn to arrange this drapery becomingly; let it cling to the stout ones and puff it up to build out the slender ones. Puff it out at the shoulders to make too narrow shoulders look broader. Confine your poses to bust and three-quarter figures unless they have striking dresses that hang well, and few of them do unless they have a train. Head and shoulders are safer because it is seldom that the costume can mar the effect. If you take a full figure, it is almost always necessary to have superfluous underskirts removed, as they prevent good arrangement of the lines and folds of the dress. An easy way to make full figure pictures striking is to bring the end of the train around in a curve in front of the figure. One soon learns to get grace and swing to the lines. Often a striking effect can be produced by placing one foot squarely in front of the other before

A WAYWARD BEAUTY

ing for a sitting, again having a few pleasant words when they come in for the sitting. If I do not become acquainted well enough before, I break the ice then. I strive to get them on a friendly basis before the operating room is entered. However, one must avoid the slightest suspicion of "freshness." I have a fair supply of the "gift of gab" and find no difficulty in bringing out a woman's best expressions. Sometimes, if she be young, it is done by teasing her about her sweethearts; but you must always use discretion and tact. Get and hold the idea firmly in your mind that you must coax up a good expression and you will find ways of doing it. Few persons take good poses naturally. You have to draw them out and make them forget themselves until the picture is secured.

IN PENSIVE MOOD

If in doubt about the hands, hide them. It usually looks well if the hands are placed behind the body with the elbows slightly bent; but if the model has pretty hands and arms, arrange the hands so that either the thumb and forefinger, or the little finger side, faces the camera. Never photograph the flat, broad side of the hands, as they look too large in that position. But show the hands if you can make them appear natural and not too large, and the sitter does not object. Master the difficulty if you can; to dodge the matter is to acknowledge your lack of skill. The painters always showed the hands and made them help the picture by their power of expressing character. On the other hand, few ladies want their hands shown, and nine-tenths of the men do not want them at all, no matter how good. Use your judgment; but refrain from so posing the subject that the impression is given that the hands have been purposely concealed.

Of course, I can hardly do more than make suggestions, such ones as may help you by starting you to thinking, and thinking in the right direction. You will soon find ways of arranging your subjects and their dresses, once you get a firm hold of the idea that it is easy to make pretty pictures of women. And bear in mind that it is much easier and more satisfactory to both your model and yourself to arrange everything in the best possible manner beforehand, rather than be compelled to try and make up for a badly selected costume and ill arrangement, by posing afterward. The hair is often the main offender. It can easily make or mar a lady's portrait. Strange as it may seem, nine-tenths of them will arrange it in any old way if told that it is stylish; and, of late years, the extreme styles have been unbecoming to most women. Some look best with a hat on their heads, and I sometimes hide hideous hairdressing in that way when I cannot get it

ANOTHER PLEASING POSE

changed. There are usually a dozen styles in vogue, but the woman whose hair makes her look like a freak always explains that she wants it that way as she desires to look "natural." Often you are forced to humor them and take them that way. If you get an order, and it is seldom you do, they will blame you, sooner or later, for the homeliness of the pictures. Explain to them that the styles change and in a year or two they will regret the pictures. Show them a picture taken a few years ago when some particular style was the rage. This will usually convince them. Induce them to keep the hair as soft and wavy as possible, avoiding the stiff pompadours and the more recent Roman braid, this last adding five to ten years to the apparent age of any woman. I keep at hand bits of ribbon, artificial flowers and

other ornaments for the hair, using them to relieve too severe effects. I even have a few curls that I loan my sitters to add to their youthful appearance.

As I have said, hats often help. If the styles are prettier than those of hair dressing, use the hats to hide the hair. And do not let the sitter select the hat either, if you can get a chance at it. She thinks she would look best in her latest and most expensive one, whether it be becoming to her or not. Light colored effects are usually best in hats as well as in costumes, and small ones generally give the best effects. Often an inexpensive turban or other small hat looks best. It all depends upon the subject. A leading London photographer keeps several new creations from a well known millinery establishment, always on hand. They not only give him an opportunity of bettering his arrangements, but they prove of great assistance in interesting and pleasing his sitters. Ladies are always pleased to try on and examine hats, particularly if new in style and from a box carrying the name of a good milliner. And if you are doing much nice work, the hats will cost you very little. The maker gets a great deal of advertising out of them, and an occasional picture in which a "creation" is shown as becoming to the subject, will be greatly appreciated.

Light backgrounds are generally best for portraits of ladies, if the costume suits them, as they give a dainty effect. The mount also can be made to help; whites, creams, tea colors and very light grays heighten the effect, particularly if double mounted. In double mounting, use two inserts, selecting them carefully to suit each picture.

Ask your lady sitters to come only on bright days, and tell them the best time of day to come. It does not pay to make them under other than the most favorable conditions. Use quick lenses and the fastest plates in order to avoid strained expressions and danger of movement. I use lots of light from a 14x18 skylight of ground glass without curtains, and have no trouble with draperies. If your drapery comes chalky, simply curtain or screen the light that strikes it. My exposures are usually one-half second, but sometimes I take them opposite my single-slant light full open, in one-tenth second. My lens works at only f-6.8, but I get all the detail I need in any pose, using it full open. Some photographers, in fact a good many, develop too far in the hope of bringing out detail. They merely succeed in blocking up the lights, as the detail in the shadows is all on the surface of the plate, and comes quite early in development.

Outlines

It is true that there are (in nature) no outlines, but everything has a boundary—and these boundaries have a definite shape. Every object in nature divides space into two parts, the space where it is, and the space where it is not; between these two portions of space there is a boundary, which is not space itself, for it takes up no room, but it has form for all that.—John Collier.

The Making of Portraits in Colors

By S. G. Yerbury

We are pleased to be able to place the following article before our readers, coming as it does from the pen of a gentleman who has had the practical experience that comes from making color portraits commercially. Mr. Yerbury was intimately connected with the color studio operated in London a few years ago; and, while this article is merely an attempt to set down the underlying principles, it covers the difficulties which resulted in the abandonment of the studio as a business venture. We might add that a still further discouragement resulted from the difficulty experienced in securing the necessary painstaking care in the various steps in the manipulations, from the making of the negatives to the production of the prints. The idea has become current that a lack of patronage, or, rather, a lack of appreciation on the part of the public, was the cause of the discontinuance. This is a mistake. It will, we feel, form an important link between the article by Mr. Cromley in our May issue and other articles bearing on the same subject which are in preparation.

Within the last few years, much has been done towards reaching that ideal point, the production of photographs, commercially, that have not only the beauty of light and shade, but the more elusive charm, the colors of nature. In fact, there was recently a studio here in London that was devoted to portraiture in natural colors, but it did not achieve commercial success, the problem of producing the work expeditiously and well in a commercial way being greater than it at first seemed. The discontinuance of this studio leaves us who are interested in the work much like an assaulting party that has failed to carry a fort at the first onslaught; we are nursing our wounds and debating the advisability of further attempts.

In this rather general summary of the situation, I shall attempt to treat the subject only in an elementary way, hoping thereby to enlist the interest of those who have not given the matter the thought to which its importance entitles it. Let the photographer think for a moment what a radical change the introduction of color into his work would make in his methods and his ideas. While now he renders his conception of his sitter by the simple use of light and shade, the introduction of color, so sure to come, will multiply the difficulties and complicate them as well.

In all of the successful methods of producing prints upon paper in the colors of nature, three negatives are required. The worker must first make sure that these negatives correctly render three images exactly suited to give the desired results in the three colors in which they are to be printed. This accomplished, he will have traveled a good portion of the road to a successful result. After that comes the matter of harmonizing the light and shade to the coloring, and both of these to the subject in hand. As an example, a young lady in a ball dress will require an entirely different key of lighting from an elderly gentleman in a dark frock coat, because there is so much more color in the first than in the second. But will the color also harmonize in the two different lightings? And still another great difficulty lies in the almost imperceptible variations in the complexion of one's sitters. The slightest variation in the balance between the three colors makes itself at once apparent in a marked degree. Moreover, people's complexions change from day to day, and the change is not noticed by either themselves or their friends. It requires but a very slight exag-

A WATERWAY—TOKIO By WILLIAM H. PHILLIPS

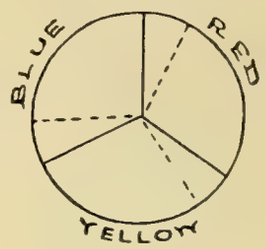
geration of this change to make a color portrait quite worthless. The artist of the brush overcomes his in his practice of always flattering the subject, and we cannot blame him, for, "Who lives to please, must please to live." Were they given to painting the truth, the inspection of a gallery of portraits would impel us to say: "What an unhealthy lot these people must have been."

But, to be elementary, I will start at the beginning. First, let us assume a dark-slide or plate-holder having three compartments, each containing a plate, and a plate not only sensitive to the blue rays, but equally sensitive to all the colors, a "panchromatic" plate. Theoretically, this is impossible; but bathing the plates in certain dyes renders it nearly a complete accomplishment. A plate bathed in pinachrome, for an example, will be found to render all but the extreme ends of the spectrum as white, except for a little weak tint where the blue-green band occurs. Our holder filled with the three "panchromatic" plates, we place in front of these last the three necessary color filters or screens, dyed respectively blue, green, and red. To be more exact, these filters are a deep and slightly violet blue; a light green, slightly yellow; and a red, rather inclined to orange. Let us examine the effect of these filters. If we place the blue one on the focusing screen and look through, everything will look blue except any decidedly yellow object, which will stand out as black. With the green one, everything looks light and green except the red or warm-colored objects, which become dark and prominent. With the red screen, everything seems absorbed in a general red hue except blue objects, which stand out clear and dark. This is just what happens when the plates are exposed behind these filters. In other words, the image desired on each plate is the result of the insensitiveness created in the plate towards one color and the absorbing power given it toward the other two colors, in each instance. Two of the colors come right through and, as it were, overexpose themselves so as to be absent or produce pure white in the resultant print from that one negative. The third color, in the meanwhile, forms its image on the plate. This overexposure describes fairly well what the scientific writers mean when they talk of absorbing or "cutting out" certain colors. Our blue filter gives us, therefore, a negative to be printed in yellow; the green filter, a red printing negative; and the red filter, a blue printer. These filters have to be of varying densities in order to bring about the absorption, in each case, of the two colors not wanted, leaving the desired color to form an image on the respective plates. This being the case, the three exposures vary in length and their ratio must be found. This is done by exposing trial plates under their respective filters, in the camera, using a white subject, such as a plaster cast or a piece of crumpled paper. When one can get the same density in this subject in all three negatives, developing them for the same length of time in the same developer, the exposures given the three plates will be the ratio or exposure for the three filters in the same sort of a light. Yet this ratio will alter with the brilliancy or dullness of the light. On a bright day, the exposures may be, let us say, three, three, and four seconds for the red, green, and blue filters respectively; while, on a dull day, there would be a greater difference in the ratio as well as in the actual exposure time; there might be required four, five, and eight seconds. Even a greater difference in the ratio might occur.

As the negatives must all three be such as to produce prints that will "register" perfectly, each with the other two, it is essential that the camera, stand, dark-slide, and lens be all quite firm and solid during the making of

any set of three negatives. The negatives must be soft and full of detail without being overexposed, although the blue printer, made through the red filter, may have that appearance. It is well to include on the margin of the plate a strip of color chart to assist in adjusting the printing film.

So much concerning the production of the three-color selecting negatives. Still another point that requires attention is the agreement of the colored films with the negatives from which they are printed. Let us suppose a strip of paper, colored to represent the spectrum, be bent around to form a circle, and from the center of this circle are drawn three lines to divide it into three equal parts. The portions of the spectrum chart included within each of these three divisions would represent the parts selected by the three color negatives; and it is therefore obviously essential that the three negatives should be printed in the colors representing these three parts of the colored spectrum chart. The illustration herewith will help to make this matter clear. Should the negative be printed in a selected set of three colors varying to one side as indicated by the line of dashes, or to the other side in like manner, the resultant prints would tend towards a greenish yellow or a bluish violet tone. A proper balance, the very essence of color work, would be missing. The filters, of course one can understand, must also be capable of acting selectively upon a wide band so that the separations will overlap or blend into one another in printing; otherwise the results will be crude in coloring. Mr. Klein, who translated Von Huble's book, "Three-Color Photography," after reading over this manuscript, advises that this bending of the spectrum into a circle is used by that writer in teaching and experimenting.



No printing process has yet been put forward that meets completely the requirements for perfect results. Those at present available require the separate colors to be placed one on top of the other, with the result that the top one unduly dominates the two below, while the bottom one is overshadowed by the two above. The results are therefore at fault to just that extent, despite the fact that the negatives may each give a correct abstract of each of the colors visible in the subject placed before the lens.

When the successful accomplishment of color photography becomes an assured fact, the field will be an extremely lucrative one. The experience of the color studio which was operated here in London proved conclusively that people would willingly pay five or six pounds (twenty-five to thirty dollars) for a good color portrait about cabinet size.

As our art is not a Divine gift, so neither is it a mechanical trade. Its foundations are laid in solid science. And practice, though essential to perfection, can never attain that to which it aims unless it works under the direction of principle.—Sir J. Reynolds.

Photographing Into The Sun

By James F. Wood

Illustrated by the Author

SUNLIGHT ON THE WATER

THERE has always been an idea in my mind that the Pacific Coast must be a glorious place for the making of pictures; not photographs, but pictures. There are endless thousands of photographs made; but, alas, how few of them are pictures; photographic pictures that one can hang on the walls and have the beholders admire and remember, instead of being forgotten as soon as one is out of the room in which they are housed. And the making of pictures can be made easier than by bothering to pose models in the woods, in suitable interiors, or any other place, by placing them between the camera and the sun. There you can get a halo around the figures from the halation; the light effects will be strong and clear, and there will be none of that miserable, microscopic detail that seems to invite the use of a magnifying glass. When the finished picture is hung, it does not look like a gray hole in the wall when viewed from across the room.

The right time to secure these effects is towards sundown; but, by watching for a good chance, they can often be secured even in the middle of the day. Ninety per cent. of the good pictures are the result of luck in finding them, combined with an appreciative eye that knows a good thing when it is seen. And one must remember that it is the effect that is wanted. Never mind the detail; let the effect of light produce the picture. Do not try to make portraits; they are a matter of the studio and the portrait professional. Try, however, a pretty figure at the beach with your western waves dashing on the shore and every drop of spray glistening in the rays of the setting sun. There should be some water in the foreground to reflect the light a little, else the figure will be only a silhouette. I have secured such effects, utilizing an ordinary hollow in the fields that had been left full of water after a rain.

Amateurs who have been at the work long enough to know better have told me: "Oh! don't try that. You must have the sun at your back or slightly at the side. I never heard of such a thing as pointing the camera

right at the sun." But it can be done. If the sun comes into the picture and is too bright, get it behind a limb of a tree or some small object that will cut out the actual spot it would make on the plate; a thin one that would print black, by the way. You will still have the light glistening on the tips of the waves or making strong, beautiful lights in your water foreground. If the sun is high enough to be out of the picture, then hold the slide over the lens so that the strong, direct rays do not strike the front of the lens and produce fogged effects.

The few examples shown herewith are selected from the few at hand more for their value as giving suggestions rather than as examples of the best work of this class. The best results of my own experiments along this line are in the form of prints that the editor has told me would not reproduce to good advantage on account of their color and rough surface.

Strive For The Perfect

Nothing makes the soul so pure, so religious, as the endeavor to create something perfect; for God is perfection, and whoever strives for it, strives for something that is Godlike. True painting is only an image of God's perfection,—a shadow of the pencil with which he paints, a melody, a striving after harmony.—Michael Angelo.

Home Portraiture For The Amateurs

By V. A. Wood

Illustrated by the Author

THE PASTOR'S DAUGHTER

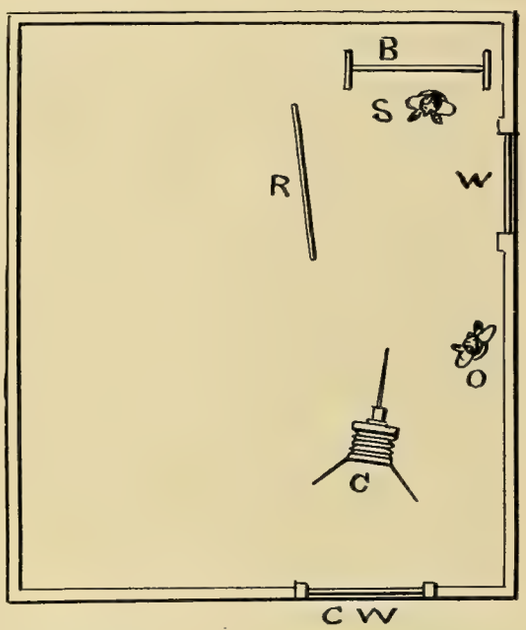
PORTRAITURE is a branch of the photographic art usually attractive to the amateur, but one that taxes his inexperienced powers to the last possible degree. If he only had a studio with that indispensable skylight, not to mention backgrounds, reflecting-screens and other necessary paraphernalia, what wonders he would doubtless perform! But usually he has only an ordinary window alongside of which to seat his subject and the light and shade are of such sharp contrast, and the background and surroundings so uninspiring, and room for adjustment and manipulation of the camera so scanty, that he goes at his task with discomfort and forebodings of failure. Then if there is to be included in the picture a child of tender years and uneasy disposition, he knows instinctively that a goodly number of wasted plates are apt to be the forerunners of final success.

I remember my first attempt with a "Harvard" 2½x4 camera. The subject was placed alongside a window with direct sunlight streaming across his face. The result was not complimentary to the subject, as the readers of this magazine will readily understand.

Then it was hard for me to get away from a preconceived idea that the lens must always be stopped down, and every part of my picture absolutely sharp. The lessening of light and the prolonging of exposure seemed unavoidable and was more or less patiently borne with, according to the number of plates spoiled by the subject's unconscious movement during the time the lens was open. I finally got to taking portraits out of doors in the shade of the house. I secured some good results in that way, but was often bothered by too brilliant light, or the wind blowing, or the day being chilly. A great many days were absolutely prohibitive of such work, and the long stretch of winter weather, with snow on the ground, had to pass unimproved.

After taking sittings under a great variety of conditions, I have gradually settled down to an arrangement which I follow out as nearly as practicable wherever the work is to be done. I place a Morris chair alongside of a window on the north side of the house, or on the shady side where the north is not available. This style of chair will accommodate one, two, or

three subjects, as required; the arms of the chair affording the second and third seat. A second window, just back of where the camera must be placed, will greatly aid in giving more even illumination of the subject. The shades, rolled clear to the top, and lace curtains left in place to soften the light, will give the best effect. When the light is weak, the latter may be dispensed with. An ordinary sheet should be strung up or held by an assistant, opposite the window and alongside the group. The background is a proposition with which you must wrestle, but the natural wall of the room modified perhaps by some piece of furniture such as a piano or dresser, and well shaded from direct light, will yield a suitable and oft-times very pleasing effect. In case of bust portraiture, another sheet may be pressed into service, and, if convenient, agitated behind the subject during exposure, thus eliminating wrinkles and securing a blended effect more like a gallery background.



B. Background
C. Camera
C. W. Curtained Window
W. Window
O Operator
R. Reflector
S. Sitter

Here is a hint as to focusing for bust portraiture that will eliminate

ON THE BEACH AT THE FIREPLACE IN THE MEADOW

much bother. It was passed on to me by a friend who saw Mr. Steadman work years ago. First, get a sitter to focus on so the head and shoulders just nicely fill the plate. Then make a scratch on the focusing scale or camera bed where the pointer indicates. Take a piece of strong cord, or a cheap tape-measure, with a ring in one end, drive a round-headed tack in the rising front of the camera, slip the ring over the tack, stretch the string or tape to the sitter's cheek, and cut it off an inch longer. On the spare inch fasten a leather tab. Then, when you want to take a home portrait, simply guess at the distance, hook on the ring, hold the tab at the sitter's face; and, if too far or too near, shift the camera. Thus you know you are nicely filling the plate and if the pointer is at the scratch on the focusing scale, you have a sharp focus. You have then only to use the finder and

SOME HOME PORTRAITS

you will readily see what a convenience it is to avoid the delay and bother of focusing when working in ordinary living rooms. The tripod legs are hooked together near the head with three sets of hooks and screw-eyes so that all may be picked up together and moved about as easily as a chair.

The camera being accurately focused, the lens is left with full aperture and the shutter set for bulb exposure. The operator interposes his body between the lens and the light from the window beside the subject, taking care not to venture within the angle of the view, but still close enough to keep the direct glare of light out of the lens. Perhaps a diagram here will make everything clear:

After directing the subject or subjects where to look, the crucial moment for exposure has arrived. With a Bausch and Lomb rectilinear lens working at f-8, the exposure between two and three p. m. will be in the neighborhood of four seconds. Due allowance should be made for variation between summer and winter light and for bright and dark days; also for light or dark clothing. For my plates I use the same developer, hydro-metol, as with my developing paper, diluted sufficiently to produce a good negative in from three to five minutes' development. Some plates should be treated with acid fixing and hardening bath; and, in warm weather, dried in a draught of cool air. Aim to secure a vigorous negative; then a soft or portrait grade of paper will produce fine results.

Now the question arises, Shall we be satisfied with the result obtained without retouching? I say emphatically no. Even if you are "only an amateur" and have considered retouching a strictly professional art, make the attempt and practice until

you are able to get satisfactory results. I have never taken lessons in retouching, yet it took but scant practice to secure quite creditable results. A twenty-five-cent bottle of retouching fluid will last for years. Shake the fluid against the cork and touch the rim of the cork to each face to be retouched; then, with the finger tip, gently rub the fluid over the face until it is evenly spread and becomes "tacky" to the touch. Then dry it a little over a radiator, stove or lamp, with very moderate heat. A suitable hard retouching pencil may be purchased of any photo dealer for ten cents. Sharpen it to a very long point and finish with file or sandpaper until it is needle-like. For a retouching desk, move a table or stand near the window, lower shade to within six inches of the top of the stand, put a good-sized sheet of blank white paper on the stand near the window to give full reflection of the light. Now seat yourself comfortably, hold negative in left hand, resting arm against stand, hold pencil in right hand and proceed to retouch.

Your chief danger lies in overdoing the matter. First try touching out the freckles or facial blemishes only, balancing up the lighter places with the darker. This is done with short, delicate, usually curving motions of the pencil point. Let every touch be exceedingly light, going repeatedly over the same places where necessary. You will soon observe the general effect of this evening-up process. Where the high lights slope away into shadow let the pencil touches become correspondingly lighter and lighter to preserve the proper shading. When the complexion has thus become properly evened up and blemishes eliminated, you are ready to modify the wrinkles. Some of these may be so far reduced as not to show at all in the finished print, but the main effort should be simply to soften down moderately these character lines of the face. Bear in mind that you are simply after a softened or modified effect. Better underdo it at first, making a print to see where further retouching will be beneficial; then try again. If you wish to begin all over again, a fresh daub of retouching fluid will obliterate your work and you can begin again. I find that an occasional study of the negative reversed will greatly aid in judging the effect and revealing further what is to be done.

It is not necessary to varnish the plate after retouching, but specks of dirt or dust are very apt to lodge on the retouched places and produce tiny white spots on the prints. Better dust the plate occasionally and carefully with a camel's-hair brush or soft handkerchief; and, if white spots are found on the dried or mounted prints they may be touched out with a slight amount of India-ink on the tip of a fine sable brush, or your retouching pencil may also be used for this purpose.

I have not yet paid much attention to flashlight portraiture, but notice, of late, that more is being said in its favor, and I have little doubt that some very excellent results may be secured by that method. If, however, the subject is nervous or there is an element of uncertainty as to when the flash is to go off, the expression "caught" is usually unsatisfactory. Then, too, if the eye catches the flare of the light or the reflecting screens are not properly placed, there is apt to be an air of ghostliness about the result peculiar to flashlight work.

Your prints, neatly mounted or slipped into slip-in folders, should readily bring the same price as that charged by the nearest photographer. Your excuse for charging a good price will be that the local photographer has done nothing to justify unfair competition. He has his studio to maintain, help to hire and a living to make. He has spent years in perfecting himself in the business. He cannot afford to do work "just for the cost of the material" or "just for practice." Neither can you, and your work will be much more highly appreciated if your customers pay a tolerably good price for it. Aim to turn out a quality of work that will win admiration and even make the local photographer hustle to keep ahead of you. Remember that, according to Napoleon, "impossible" is a word found only in the dictionary of fools. Wherefore, get busy, try hard, and—succeed.

ROSES By JOHN HADDON

Utilizing Misused Film

By D. P. Church

It seems to be a settled thing that the average amateur will get a certain proportion of his negatives in such a condition that they are useless, some of them not even worthy of the name of negatives. Those that are in the form of films can be utilized as flash sheets, answering admirably for the purpose.

For a portrait or small group, four or five feet from the camera, about four 4x5 films will suffice. Take a string about five feet long, and, by means of bent pins tied into it about five inches apart, suspend the five pieces of film, one above the other, by their corners. Hang the string in the desired position and so that the bottom piece of film is a few inches from the floor. See that there is nothing within three or four feet of the top one, as the flash grows in intensity as it goes upward and rises quite

high above the last film. Place a folded newspaper below to catch any cinders that may fall.

It is a good idea to burn a piece of the film for the benefit of the sitter, explaining to him that the string of film will make a much more brilliant flame, and that there is no danger of the house catching fire. Otherwise, the flame will alarm him and perhaps spoil the negative. Place a lighted lamp near the top of the string of film and study the lighting. Open the shutter and use the lens as wide open as possible. U. S. 4 will give a fully timed negative with the five pieces of film. Light the bottom one; it will burn slowly, allowing the sitter to become accustomed to the light and making it easy for the eyes. As the flame rises, each film adds to the light. Close the shutter as soon as the flash ends.

I have also found it a good plan to burn a piece of the film to shorten the exposure when making portraits by an ordinary window on cloudy days or when the sun is quite low. When the light coming from the window is weak enough to cause no danger of halation, some very pleasing effects may be secured by pointing the camera directly at the window, placing the sitter in profile in front of the window, and then burning two or three of the films, just out of range of the lens, so as to light up the

EXAMPLES OF FILM FLASH WORK

near or shadow side of the face. Posing a sitter by a window through which strong light falls, with the camera close against the wall in which the window is situated, gives a very contrasty lighting if a reflector is not used to lighten up the shadow side. Two or three films burned at the side of the sitter opposite the window, the shadow side, seems to give a better effect than using the reflector. Various combinations of this film-flash and daylight can be worked out with a little care and thought.

Of the three examples herewith, the larger or central one was taken so as to include a portion of the flash. The one at the left is an attempt at a lamplight effect; while the other was made as a study with the intention of arranging something of the kind outdoors, using the burning film to give an effect of a campfire in the woods. I think these simple examples will be more suggestive than would some of my work that more nearly approaches straight portraiture. These three were all made in the same room, are of the same subject, and made within a brief half-hour; the larger one being made to illustrate this little article by showing the flash and the open magazine placed below to catch the cinders.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, AUGUST, 1910. No. 8

The Award In Our Advertising Contest

A letter from Percy M. Reese, under date of June twenty-first, has come to hand. In it he says: "I also had a letter from the Eastman Kodak Company advising that I had won the prize in your competition and asking how a 1A Speed Kodak would appeal to me. I replied that as I already had a 1A Kodak and, moreover, was particularly interested, at the present time, in miniature cameras, I would be greatly obliged if they would substitute a No. 0 Graphic. While in Germany last summer, I had bought a vest pocket camera fitted with one of these three-inch anastigmat lenses and it had daily astonished me by its performances. My letter brought a prompt reply, kindly consenting to my request, and saying that a No. 0 Graphic had been ordered sent to me. As soon as I have time to try it thoroughly I will write you a report, with illustrations, for publication, showing what these little lenses will do. I am continually surprised by their wonderful speed and the capability that the resultant negatives have for enlarging."

We are more than pleased to find the outcome of our efforts so satisfactory to the winner of the award. As for ourselves, we are more than grateful to all those who so kindly responded to our call for an expression of opinion concerning the merits of the advertisements in our pages. Their replies have given us an amount of information that is of the greatest value; information that should be of still greater value to such of our advertisers as interested themselves in our report of the results as published in the June issue.

Poor Old "Amphibolous Phrenesis"

"American Photography" recently got out a circular letter that proved conclusively (?) that it was a better advertising medium than all the other photographic magazines put together. And it gave the actual figures to sustain its contention. However, it forgot to mention that while it was running two pages of the advertisement in question, and booming the offer with strong editorials, the other magazines quite naturally avoided editorial endorsement; and many of them ran only small, eighth page squares advertising the wonderful bargain in "something indispensable," that "you will have to have sooner or later." It also neglected to call attention to the obvious fact, quite important in the case, that its advertisement could hardly be expected to appeal to readers who long ago expressed their disapproval of the magazine advertised by discontinuing to countenance the change from the bright and sparkling "Beacon," the brisk and breezy "Camera and Dark Room," and the instructive and helpful "Amateur Pho-

tographer," to the rather insipid production labeled "American Photography." What poor old Amphibolous Phrenesis should have done would have been to come right out and plainly confess that the sale of the "Self-Instructing Library of Photography" fell off as soon as such sale was coupled with its name, despite the increased advertising and the thirty per cent reduction in price. To try and twist the facts into proof that "American Photography" is a good advertising medium is as ridiculous as it is futile.

The Milwaukee Convention

At this date, our going to press with this issue, it is too early to have any regular report of the National Convention at Milwaukee. However, we are in receipt of several letters from friends in attendance, and they assure us that it is one of the best Conventions that they have ever attended. It is too early to report upon the attendance, as arrivals are reaching the Convention every day. Each and every writer is enthusiastic in his praise of the work being done by the officers, and the attention that is bestowed upon the many new members. There seems to be some diversity of opinion as to the suitability of Milwaukee as a gathering place at this particular season, and some regrets are expressed at the failure to secure rates for those attending. Many new men are reported as making fine exhibits, and the display of the Woman's Section comes in for unqualified praise. All in all, we believe we will be justified in reporting it as one of the most successful Conventions ever held by the Photographers' Association, when our next issue goes to press.

THE WILLOWS By J. E. ALLEN

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

PHOTOGRAPHY OF SKIES—GRADED SCREENS.

In the last issue I published Mr. Coburn's very eulogistic account of the graded color screen. The letter seems to have raised a storm in the English photographic press, where learned editors have been metaphorically using the lens as a burning glass. A Mr. Macdonnell wrote to the "Amateur Photographer and Photographic News," that the graded screen did not grade, and supported his statement with optical diagrams (as perverters of the truth, diagrams can easily beat statistics), whereupon the "British Journal of Photography" published an article and said certain things about this diagram, giving one of its own; and, concerning this, the editor of the "Amateur Photographer and Photographic News" wrote an answer, saying worse things, and then a host of others wrote all manner of things. Now, of course, the only sensible thing to do would have been to take the same sky with and without a screen, and publish them, but this is a thing that possessors of optical knowledge never do. When I can get hold of one of these screens I will give you the result. In the meantime, so far as I can see light through the dust of this controversy, a graded screen *behind* the lens *is* effective.

Another means to the same end is taken up by the well known authority on lenses, Thomas Bolas, in the first of a promised series of articles to the "Amateur Photographer and Photographic News." The gist of his suggestion is contained in the following excerpt:

The fact that the field of the lens falls off in illumination from the center to the circumference was recognized quite in the early days of photographic work, this being more particularly the case with lenses of short focus in relation to the size of the plate, or, in other words, wide-angle lenses; thus, Dr. Meydenbauer has estimated that when a "pantoscope" lens is used to cover an angle of 110 degrees, the illumination at the margin of the field is only one-sixth that at the center.

In making use of the specially wide-angle lenses it is by no means an unusual course to adopt some expedient for more or less completely equalizing the light over the field, as, for example, the rotating star stop or screen, but the outdoor workers of our day not unfrequently employ a wide-angle lens for narrow-angle work, and move or shift the position of the plate in the large circular field without realizing that they may be materially altering the relative illumination of the various parts of the subject.

The more desirable types of modern anastigmatic doublets may be regarded as wide-angle lenses (or lenses of moderately wide angle), although the wide-angle property may be seldom taken advantage of by the user. Thus, the quarter-plate worker may use an anastigmatic doublet of about five inches focal length, which lens will illuminate a circle of nine inches in diameter, but the illumination of this large field falls off very considerably from the center to the circumference. Hence, it is that by selecting a position for the sensitive plate in this circle, the worker may have a considerable degree of choice as regards, or as to the relative, illumination of the sky and foreground, also, indeed, with respect to the relative illumination of the two sides of his subject."

To obtain the benefit of this lens gradation it is only necessary to raise the rising front so that the foreground image rests in the center of the optical field, while the sky is placed peripherally; if so doing demands a tipping of the camera, the swing back can be utilized to set matters straight, should the subject matter so demand.

THE FUTURE OF PICTORIAL PHOTOGRAPHY.

At the end of last year the "Amateur Photographer and Photographic News" published a symposium of the opinions of best known workers on this topic, and recently the subject has again cropped up for discus-

sion. Many excellent opinions have been expressed which it would take too long to quote or summarize, but among these, two struck me as of particular pertinency. Mr. Warburg, in the above-mentioned journal, writes:

"The future of pictorial photography, not as a 'handmaid' to painting, nor yet as a cheap substitute for it, but as an independent art, must, I think, depend on the development and perfection of those artistic qualities of photography which are characteristic of it. The imitation of other methods is natural in the transition stages of an art; it is only, however, when an art develops its own methods and evolves its own ideals that it stands by itself. So it will be with photography. Photographers do not, I think, realize sufficiently that certain photographic qualities of tone and modulation and drawing are unapproachable by other arts, and that when they drown these qualities in oil or gum-pigment, or weaken them by intrusive handwork, they are sacrificing the essential for the superficial. I am no enemy to oil or gum-pigment, quite the contrary, but often these methods are used to obscure, instead of to enhance, the fine qualities of our art. The present standstill in British photography is, I think, due to similar causes. Too many workers are purely imitators. It is right to examine, admire, and be inspired by fine British or foreign pictures; but if a man's work is to exist, it must be developed on his own lines, seen with his own eyes, thought out with his own brains. It is no good trying to express one's ideas in other people's language. We have too much repetition, too much work done to please others, instead of to carry out one's own ideals, too little seeking after first principles. Hanging committees also are to blame. Often work is hung because it assimilates to the prevailing fashion, not because it shows independent artistic insight and individual treatment. If each man works out his artistic ideals in his own way, and on the lines which are natural to him; if hanging committees encourage original work in all directions, instead of penning it up into certain channels; then we ought to get sound progress on national lines on many routes at once, instead of the uninspired uniformity with which we are threatened."

Dealing with the same subject in a lecture before the Edinboro Photographic Society, Craig Annan, speaking with the authority of an artist and a most successful professional photographer, said:

"The question as to whether photography is entitled to be considered one of the fine arts is, to my mind, a foolish one, but if it were asked whether photography might be utilized as a medium of artistic expression, I would most unhesitatingly reply in the affirmative.

"Photography is capable of expressing certain æsthetic emotions very completely. That its sphere is strictly limited I am quite prepared to admit, but I consider that it is still too young an art to have its scope determined. It has not yet had an opportunity of showing what it may accomplish, largely becauses it has been practiced by the wrong class of persons. In its early days it was taken up as a hobby by those of a scientific turn of mind, who found in a process a pleasant outlet for the exercise of their chemical and physical knowledge, with the added charm that, as a result of their operations, they obtained pictures. It is not surprising that the accredited artists looked askance at these performances, and without very much consideration concluded that the process, being mechanical, was only capable of producing mechanical results. They reasoned that only by the medium of the human hand could the divine element of imagination be introduced into a picture, but, as a sidelight on the probable correctness of their conclusions, I may remind you that many of the same class were absolutely assured that Whistler was an impertinent charlatan.

"Times have changed, however, and the present generation is producing a new type of intelligence, which combines a cultured artistic sense with a capacity for chemical manipulation, with the result that there is gradually being evolved a new art craft which is called pictorial photography. That the progress of the movement is comparatively slow is not surprising when one considers that so far the productions of the movement have not achieved any commercial status, and consequently few men of genius have been willing to apply themselves seriously to an art which promises so little in return for their efforts. I make no complaint on this score. One cannot expect the patron to anticipate the performance.

"The difficulties in the path of the would-be patron are obvious. By photography it is

so easy to make a picture distinctly resembling a fine thing, and so comparatively easy to produce duplicate copies, that collectors are to be excused if they are chary in venturing into this new sphere of work. At the same time, I am convinced that we will never know the possibilities of pictorial photography until the reward of success is sufficient to attract the highest artistic talent into the arena of effort.

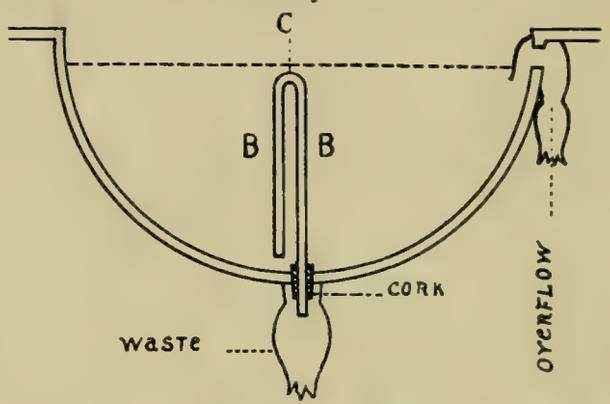
"I have referred to imagination as being the chief factor in the equipment of the pictorial photographer, and you may ask what part imagination can play in a mechanical process. It appears to me that there are two kinds of æsthetic imagination: one which evolves a scheme of beauty from the inner consciousness and expresses itself in color schemes and compositions based upon, although sometimes distantly, the appearance of natural objects, and one which enables its possessor to observe the perfect schemes which nature occasionally provides, and which are capable of realization by means of apparatus and processes. The point I wish to emphasize is that to produce the best possible work of art in photography it is essential that the worker should have artistic abilities of the highest order, or, in other words, a photographic picture cannot be of a higher order than the intelligence of the photographer."

A USEFUL WASHING ACCESSORY.

Most photographers, at some time or other, want more washing accommodation than their usual work-room provides. It may be a big batch of prints, or a gross or two of holiday exposures, or a set of slides, that we wish to get through quickly. The usual method in such cases seems to be to put the overplus of plates or prints into dishes and change the water occasionally. If the prints are separated each time and plenty of changes given, this is a very efficient way, but it is also a very tedious one.

The way out of the difficulty that I advise is to make use of the ordinary lavatory basin, fitted with a special outlet. It is no use to turn the tap on and let the water run out at the usual overflow at the top of the basin, as the hypo would merely sink to the bottom and stop there. We want a means of drawing the water off from the bottom, and this can be done in the following way:

Remove the plug from the bottom of the basin, and select a cork or bung that will fit the outlet. Now take a piece of ¼ inch compo pipe and bend it into a syphon (B). A hole must be made through the cork so that the longer leg will go through it and fit tightly, and the shorter leg should terminate about an eighth of an inch from the top of the same, as shown. In default of a proper cork-borer the hole may be made with a red-



hot wire or rod; don't attempt to make it with a gimlet or to chop it out with a knife, or the cork will split and the pipe will not fit closely. If, however, in spite of all your care, you cannot get a good fit, a little melted wax run in round the pipe will make a sound job.

A very small hole should be bored at C, and when the cork with the syphon through it is put in the outlet this hole should come just below the overflow at the top of the basin. The diagram shows the arrangement in position, and also explains its action. When the tap is turned on the basin fills up level with the hole C. The syphon then begins to act, and draws the water from the bottom of the basin and discharges it down the waste pipe.

If the tap is only turned on a little the water will run out at a corresponding rate, and, if the cork be sound, the water will always remain at the same level. If for any reason the tap ceases running, the syphon ceases also; and if, on the other hand, the tap should be turned on too much (*i. e.*, the water come in faster than the syphon can carry it off), it merely runs away down the overflow.

The appliance will, of course, act equally well in a bath, provided it is fitted with a plug waste and not a pull-up handle, and, so used, is an almost ideal way of washing very big enlargements.

Not the least of its recommendations, too, is the fact that it is a thing almost anyone can make, very often out of waste material, but even if everything has to be bought the

cost is but a few pence.—Harry Wild in "Amateur Photography and Photographic News."

AMIDOL AND THE ACID FIXING-BATH.

In the photographic papers from time to time we are warned not to use an acid fixing bath for bromide prints which have been developed with amidol, the idea being that the sulphite present in such a bath might act as an accelerator, and so cause fogging, or, at any rate, further development during fixation. That this idea is totally erroneous as regards bromide paper I think the following experiments prove: A weak solution of hypo, two ounces to the pint, to which had been added forty grains to the ounce of sulphite of soda and four grains to the ounce of amidol, had no fogging action on unexposed bromide paper, nor any action as a developer on paper which had been exposed or even greatly over-exposed. Note: It will be observed that this solution contains ten times the quantity of sulphite likely to be present in any acid fixing bath. This experiment is, of course, not conclusive. Strips of bromide paper which had received identical exposures—eight different exposures being graduated on each strip in order to facilitate comparison—were partially developed in a three-grain amidol developer containing a reduced quantity of sulphite, three grains sulphite to the ounce, and then transferred simultaneously, one to a plain hypo solution and one to the bath containing forty grains to the ounce of sulphite and four grains to the ounce of amidol. The result was that no difference could be detected in the two strips in regard to any of the exposures. Thus, the presence of sulphite caused no continuing action and no fog, although the fixing bath was heavily charged with developing agent, far more heavily than would ever occur in practice.

Now, as ordinary plain hypo, unless used fresh for each print, soon causes stain with amidol, and also is itself decomposed, depositing what is apparently sulphur, when mixed with amidol, except in the presence of sulphite, it seems to be quite as advisable to employ an acid fixing bath after amidol as after metol-quinone or other developer, and the following is a suitable formula which I have used for many years:

A:	Sulphite of soda (crystal) ...	96 grains
	Sulphuric acid B.P.....	12 minims
	Water	10 ounces
B:	Hypo	4 ounces
	Water	10 ounces

Dissolve each separately, then add A to B gradually, shaking after each addition.

With gaslight papers the case is somewhat different. The prints fixed in an old acid hypo bath, heavily charged with sulphite and amidol, will certainly be considerably stronger than if fixed in a plain hypo bath. I have determined this by about twenty experiments with different brands of paper. The difference, however, is not due to increase in density in the acid bath, but to reduction in the plain hypo—at least, with the brands of paper I have tested. I took two strips, which had received identical and various exposures, and developed them together to the same degree in an ordinary amidol developer. I then rinsed them and soaked in a solution of bromide of potassium and metabisulphite to stop development. On transferring one strip to plain hypo, two ounces to the pint, it was seen to lose immediately in apparent density. The other strip was then cut in two and one portion fixed in an acid hypo bath, also two ounces to the pint, but containing excess of sulphite and some amidol, and in this case there was no alteration in density. This experiment was repeated several times with the same results. I think, therefore, the worker who uses amidol for gaslight prints would do well to stick to the acid hypo bath unless he is accustomed to over-develop and get his prints too dark, in which case the plain hypo would give him less heavy results. He would probably find, however, that plain hypo when fresh would act differently from the same after use, not only as regards stains, but also as regards reduction of density, and so unless he over-developed he might sometimes get washed-out results. My own preference is decidedly for the acid bath, both for bromide and gaslight papers as well as lantern plates.

I ought to say that the presence of excess of sulphite up to forty grains to the ounce in the hypo bath does not cause fog either in the case of gaslight paper or bromide paper developed with amidol.—T. H. Greenall, in "British Journal of Photography."

THE QUALITY OF LIGHT.

A most valuable lecture on the above subject was recently delivered before the Franklin Institute by P. F. Bauder. Commencing with a description of the properties of daylight, he showed that while the spectrum of sunlight remained qualitatively fixed, there is great quantitative variation. He said:

"The proportion of the three colors of light composing daylight is so variable that a standard for average daylight would be difficult to obtain. How variable this standard is, may be more readily appreciated if one compares a series of colors as seen in the light of a north window with the same colors as seen at a west window in the light of the late afternoon sun. Not only do the natural conditions of the atmosphere produce such great changes in the color value of light, but it must be recognized also that certain conditions affect this quality as much or more than atmospheric changes. The causes of variation in the color of daylight entering any space may be tabulated as follows:

Causes Involving the Sky Alone.

1. Clear blue sky.
2. Cloudy sky.
3. Overcast sky.
4. Natural conditions due to rain or snow.
5. Natural conditions due to dust or suspended particles.
6. Artificial conditions due to smoke or chemical vapors.

Causes Involving the Surroundings.

1. Condition and color of surface of ground.
2. Trees, shrubbery or gardens in proximity.
3. Walls of adjacent buildings.
4. Character of windows or openings for the admission of light.

The color quality of light which enters any given space may vary in any of the three fundamental colors composing it as much as twenty to thirty per cent, according to changeable conditions of atmosphere and surroundings. For this reason, it can readily be understood that a standard of daylight has not yet been obtained to which artificial illuminants may satisfactorily be compared.

The variations which have been mentioned allow enough changes to take place to make daylight of different qualities unserviceable for some classes of interior work. There are relatively few art studios and shops where articles of delicate color value are sold in which it is possible to make a proper comparison of colors on all occasions. This is due to the many varying conditions affecting the quality of daylight which enters."

How true this is will be vouched for by all who use the autochrome plate. The difference of the colors as the plate is viewed against quarters of the sky or by light reflected from buildings is beyond all expectation. Dealing with artificial illuminants, Mr. Bauder went on to say:

"The question of the color value of given commercial light sources is one which has caused more diverse opinions to be raised than any other quality of artificial illuminants. All artificial light sources have a characteristic quality of color which is apparent from observation. The colors of the illuminants investigated may be tabulated as follows:

Designation.	Color.
1. Carbon (new)	orange-yellow
2. Carbon (seasoned)	yellow
3. Carbon metalised (new)	pale-yellow
4. Carbon metalised (seasoned)	yellow
5. Tantalum (new)	yellow-white
6. Tantalum (seasoned)	lemon-yellow
7. Tungsten (new)	cream-white
8. Tungsten (seasoned)	yellow-white
9. Nernst lamp (new glower)	pale-lemon-yellow
10. Nernst lamp (seasoned glower)	deep-lemon-yellow
11. Enclosed arc (opal outer, clear inner globe)	bluish-white
12. Gas arc, upright (new mantel)	pale-greenish-white
13. Gas arc, upright (seasoned mantel)	pale-greenish-yellow

"The colors of these sources are not readily apparent when used for general illumination purposes. Nevertheless, when a given series of colors is viewed beneath the light from any one of them which in each case is compared to the similar result under daylight illumination, it is evident that the effects produced vary a great deal from the true color values as seen under daylight illumination."

Attention is drawn to the great advance the tungsten lamp shows over the carbon

filament in its truer rendering of colors. He added:

"A question has arisen among the users of light as to the actual effect of raising or lowering the voltage impressed upon an incandescent lamp in changing the intensity and especially the color value of such an illuminant. By means of the colorimeter the effect of voltage on green and the effect of voltage on red were taken, with the red one hundred per cent in each case, to show what the variation in the green and red fundamental colors would be. The closer approach to the value obtained with the daylight value shown by the base line in each case of the tungsten lamp in comparison to the other incandescent light sources is very marked. Another detail not to be overlooked is that all of the electric incandescent lamps tend more nearly toward the daylight value as the voltage is increased above its normal value."

POST CARDS FROM 4x5 NEGATIVES.

One of our Maine subscribers, R. H. Gay, sends me some very nice post cards together with a description of his method of procedure in printing them from his 4x5 negatives. He takes a 5x7 printing frame, one of the heavy kind costing thirty cents, and fits it with a piece of glass, a 5x7 negative, cleaned off, answering admirably. Next he takes an old mount or piece of a plate box, cuts it 5x7 to fit the frame, and in the center cuts an opening just large enough to receive the 4x5 negative. This goes into the frame behind the glass. A sheet of paper then is cut with a 3x4½ opening, laid upon the negative as it lies in the cardboard frame behind the glass, and is adjusted until the opening just encloses that part of the negative that is wanted to print. Then a line is marked around it where it lies on the cardboard, this guide removed, and strips of opaque paper about an inch wide are pasted on the cardboard so as to inclose the portion desired to print. Gummed passepartout strips, either red or black, are very convenient. If a piece of transparent paper is cut just the size of a card, then placed on the negative, and all held up to the light, one can easily adjust it so that the part of the negative showing inside the 3x4½ boundary strips of opaque paper come directly in the center of the card size. Hold the paper in position and indicate where one corner comes by gumming on a piece of white paper cut "L" shape. Then, the desired negative inserted in the cardboard mask, all one has to do is to fit the card to be printed squarely into the "L" shaped guide, close the frame, turn over, and print.

TO REMOVE AN OFFENDING BACKGROUND.

A subscriber made some cabinet heads recently, using a quiet wall decoration as a background, but the sitters demand something along what they consider more professional lines. How to remove the background is the query. First place the negatives in a clean, fresh hypo bath, for at least ten minutes. Then, without even rinsing, take out and blot off all surface moisture. While the negatives are soaking in the hypo, take some crystals of red prussiate of potash and grind them in a mortar to a very fine powder. The negative blotted off, take a No. 3 brush, moisten it in some hypo solution, dip into the powder, and apply the mixture around the outline of the picture. Always work with the negative in such a position that any running of the mixture will be away from the figure, and always have a tap running close at hand, so that if any of the strong reducer should work past the line and begin to eat into the figure, the action can be stopped at once by holding the negative in the stream of water. Once cleared up around the outline of the figure, a larger brush, or even a wad of cotton, may be used. Where the outline is intricate, a smaller brush than the No. 3 may be required. There will be some rather ugly looking markings, a sort of yellowish stain, in the parts cleared away, but returning the negative to the fixing bath will remove them. A good washing must, of course, follow. This leaves a clear background, having much better quality than clear glass such as results from scraping it away, and the edge of the figure will not have that cut-out appearance which characterizes the use of the knife. With a negative marking pencil and a little skill in the work, good backgrounds may be introduced on the glass side of the negative; or, a retouching pencil can be used on the gelatine film, it having in no way been damaged, except that it has been made rather glossy and will require a good retouching medium.

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

USING A SPECTACLE LENS.

An Iowa correspondent desires to know all about it. What he wants to get is an ordinary spectacle lens in its original round form before it has been "shanked" to an oval, ready for use. The optician will supply one of any desired focus, and it is best to obtain a so-called pebble or quartz one, as it is much harder, besides passing more of the ultra-violet rays. The periscopic form, convex on one side and concave on the other, is the best, and it should be used with the concave side front; that is, facing the subject. The stop should be placed in front of the lens. The mounting is not important. We have seen quite serviceable ones built up with long strips of paper, well pasted, and, after drying being given a coat or two of hard, dark varnish. The better plan is to have a brass tube made, into which a choice of lenses may be dropped and secured by spring rings, as a longer or shorter focal length is required. After focusing the image as sharply as possible, the lens should be racked inward toward the plate just a trifle; to be more exact, about one-fortieth its focal length.

WHERE THE TROUBLE LIES.

We do not maintain a regular department of criticism to which our readers can send their pictures, and later, if the criticisms be well sprinkled with some glittering generalities that can be construed as praise, show their friends what the editor has said about their good pictures. But we do criticise a lot of prints each week; and, knowing that our efforts in that direction result in more or less that is disagreeable, we inflict them only upon the sender of the particular prints in question. But in this work, the most intangible difficulty we have to deal with is the one introduced by the imagination of the maker of many of the pictures sent in. He comes upon a beautiful scene; and, the charm perhaps that color lends it, induces him to make an exposure. Reduced to monochrome the resultant picture is flat and insipid, or spotted and eye-racking. But the photographer, aided by his memory of the actual scene, sees all the beauty and cannot understand why we fail to do the same. In vain he writes us that the scene was a most beautiful one. We can see, he feels sure, the beauty of the strongly sunlit middle distance with the dark hills in the distance. The large, stately trees near at hand and the wooded hills beyond. But we do not see these beauties. All we see is an ugly, straight strip of uninteresting foreground that can be anything from a slate bed to a field of ripened grain, a strip of white above it that may be a whitewashed wall, and then a strip of black that is quite likely hills, but might be a fresh-plowed field on the other side of the wall. Trees near at hand and trees in the distance, have, in the picture, been made to appear as fairly well grown shrubs, interspersed with smaller bushes, much as berry vines are often made to utilize the spare ground in an orchard of small trees. We find we have quite closely described an actual picture as it was sent in, together with the maker's comments thereon; so we might as well tell the whole story: It is a typical one. While our criticism was taken in good part, the worker still maintained that the scene possessed beauty worthy of recording, and tried it again, giving longer exposure and shorter development in order to avoid the white wall effect. The resultant print again failed to give satisfaction. The shadows showed that the sun was shining brightly, and yet, the effect was that of a grey day. The same untruthfulness can be produced, to a certain extent, by using a paper that works too soft for the negative employed. On the other hand, it is not harsh contrast that gives a rendition of sunlight effects. What is wanted is soft rich shadows and sparkling high lights, with full gradation all through. This can be obtained by right exposure, and development carried to just the right point. But where both the pictures failed, and failed woefully, was in the indication of the

various planes. The distant trees are in the same tone as the near ones, and equally sharp; all seemingly in the same plane and appearing much as currant bushes planted between small trees. It is quite true that we can draw solid objects on the flat, and by attention to perspective in so doing, satisfy the eye. But we can do it a great deal better by the introduction of light and shade; and when it comes to the planes of a landscape, recourse must be had to aerial perspective which depends upon the use of varying tones to represent distances. And in all this I have said nothing about the interest which a picture should possess; neither have I mentioned composition, that is, the pleasing arrangement of lines and masses. Most of the pictures sent are of interesting scenes; and while good composition is essential it is a subject that the worker can hardly study to advantage until he has mastered the matter of truthfulness in values and the rendition of planes; at least, in landscape work.

ENLARGING UPON CANVAS.

A Pennsylvania subscriber wants to enlarge upon canvas as a basis for oil painting. I have had no practical experience in this work, and find professional enlargers or solar printers each have their own pet way of working, that, without their particular knack of handling, a knack acquired by long use, would be of little use to another when reduced to the bare formula. However, here is the necessary directions as published recently as a tested formula by one of the foreign magazines. The prepared canvas must first be well washed to remove all grease in ammonia and methylated alcohol, about one part of the first to four of the last, and then dried. The coating is made by taking fifty parts of fresh albumen, adding it to one hundred and twenty-five parts of water; and, when well mixed, adding:

Potassium iodide	9 parts
Ammonium bromide	4 parts
Ammonium chloride	1¼ parts

Beat all together until well mixed, allow to stand for an hour, filter through flannel, add one hundred and twenty-five parts of water, and finally add a gelatine solution made by swelling seven parts of gelatine in two hundred and fifty parts of water and dissolving by gentle heat. Distilled water must be used throughout. This coating is applied to the canvas with a brush made by drawing a small, soft sponge partially into the end of a piece of glass tubing with a loop of string. In other words, what our English friends call a Buckle brush. When this coating is dry, sensitize by applying:

Silver nitrate	20 parts
Glacial acetic acid	10 parts
Distilled water	240 parts

Exposure must be made immediately after sensitizing, and requires about a minute, using an ordinary negative and strong daylight. Developing is done with:

Gallic acid	3½ parts
Lead acetate	6/10 parts
Distilled water	250 parts

Follow by rinsing and fixing for five minutes in a one in five solution of hypo. The developer, as well as the sensitizing solution, is best applied with what is called a Blanchard brush. This is made by winding a strip of canton flannel around a strip of glass, a small plate with the emulsion cleaned off answers admirably, holding the end in place with a rubber band, and using one edge somewhat as a flat squeegee is used, dipping only that edge in the solution.

MOUNTING PRINTS AS OPALINES.

An ounce of good gelatine, a soft kind is preferable, is swelled by soaking in water; then made up to ten ounces with more water, and melted by applying gentle heat; the containing vessel setting in another containing hot water. When melted, it is thinned down still more, making it almost water thin. Immerse both print and glass until both are warm, withdraw in contact, and immediately squeegee with a flat rubber squeegee; then cleaning off the face of the glass and allowing to dry.

"DEVELOPING IN DAYLIGHT."

This is the title of an informative and instructive little booklet that you should send for at once. It treats on tank development in a thorough manner, giving formulas, hints, and reasons for adopting the newer method, that should appeal to all camera users. Write for a copy, addressing Burke & James, Jackson Boulevard and Desplaines Street, Chicago, Illinois.

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NEW MEMBERS.

2521—W. L. Raab, Box 27, Dallastown, Pa.
Lantern slides and 4x5, developing paper, of general views usually with figure or figures, some speed work; for lantern slides and colored prints of the same. Class 1.

2522—Frederick John Kraemer, Valdez, Alaska.
Class 2.

2523—Mrs. Blarney Stevens, Valdez, Alaska.
3¼x4¼, 4x5, 4x12, developing paper, of figures and views; for views. Class 1.

2524—Harry J. Schultz, Valdez, Alaska.
Class 3.

2525—Wm. Mathieson, Jr., Box 8, Cromwell, Conn.
4x5 and 5x7, developing paper, of streets, landscapes, and groups, all amateur work; for the same. Class 1.

2526—E. H. Long, Florence, Colo.
Class 3.

2527—G. M. Barsness, Adams, N. Dak.
8x10 to post cards, developing paper, of general studio work, portraits and views; for portraits. Class 1.

2528—Marjorie R. Zoller, R. F. D. No. 1, Fort Plain, N. Y.
3½x3½, 3¼x4¼, developing paper, of outdoor scenes, local views, and animals; for pictures of general interest, especially horses and children at play. Class 1.

2529—J. Lu Strachan, Ionia, Mich.
3¼x5½, developing paper, of scenery, views, landscapes, rivers, etc.; for views of water or landscape in post cards only. Class 1.

2530—Ralph Kling, Palo, Mich.
3¼x5½, developing paper, of scenery, views, landscapes, rivers, etc.; for views of water or landscape in post cards only. Class 1.

2531—J. Elliot Patterson, 247 2nd St., Ashland, Ore.
4x5, 3¼x5½, 5x7, developing paper, of mountain scenery, general views, and railroad views; for mountain scenery, farm scenes, bird and animal pictures, and Indian pictures. Class 1.

2532—W. H. Boyer, R. F. D. No. 7, Gallatin, Mo.
Post cards of general views; for the same. Class 1.
(Number incorrectly given in the June issue as 2328.)

2533—Gilmer Winston, care Union & Planters' Bank & Trust Co., Memphis, Tenn.
4x5 and 5x7, various papers, of general landscapes, some historical views, and landscapes hand-colored; for the same, also will exchange post cards. Class 1.

2534—W. R. Frye, Buckley, Wash.
3¼x5½ and post cards of landscapes; for the same in post cards only. Class 1.

2535—R. D. Count, 89 Spruce Place, Minneapolis, Minn.
5x7 and 3¼x5½, glossy developing paper, of scenery, genre, and views of general interest; for the same only. Prints to be unmounted with white margin. No post cards, portraits or pictures of purely personal interest wanted. Class 1 for good workmanship only.

2536—Richard T. Le Fevre, Box 14, Eagle, Alaska.
4x5, developing paper, of landscapes and views; for the same. Class 1.

2537—E. J. Tiefenbran, 1441 Granville Place, St. Louis, Mo.
3¼x5½, developing paper, of landscapes and views of general interest; for the same. Class 1.

2538—Edw. H. Ruediger, 2520 N. 21st St., St. Louis, Mo.
4x5 and post cards, developing paper, of landscapes and public buildings; for the same. Class 1.

2539—A. H. Siegrist, 6216 Berthold Ave., St. Louis, Mo.
Up to 5x7 and post cards, developing paper, of landscapes and public buildings; for the same. Class 1.

2540—J. R. Cunningham, Valles, S. L. P., Mexico.
6½x8½ and smaller, printing-out and developing papers, of mountain scenery, landscapes, water scenes, tropical scenes, etc.; for anything interesting. Class 1.

RENEWALS.

1039—Harrie A. Holmes, Greenland, N. H.
Post cards and 4x5, of scenery, home portraits and miscellaneous; for home portraits or any photos showing people, no scenery desired. Good work. Class 1.

1241—Grant Hinshaw, 762 Delaware Ave., St. Paul, Minn.
Class 2.

2057X—James Dunlop, R. F. D. No. 33, Placerville, Cal.
Changes from Class 1 to Class 2.

2078X—L. Hanlon, Whangarei, New Zealand.
Stereos, post cards, and lantern slides, 3¼x3¼; for same of beautiful, interesting, and pictorial subjects. Only first class work accepted and sent. Exchanges out of the U. S. especially desired. Class 1.

2107X—Arthur H. Williams, 145 N. 5th St., New Philadelphia, Ohio.
Post cards of landscapes and historical subjects; for post cards only. Class 1.

2139X—A. G. Hill, 8 Hobart St., Meriden, Conn.
Waterfalls, including Niagara, landscapes, and miscellaneous subjects; for anything interesting in post cards only. Good work only sent out and accepted. Class 1.

2169X—John Parpal, Jr., 1322 Elysian Fields Ave., New Orleans, La.
Up to 6½x8½, also post cards, of Central America and Panama Canal, and out-of-the-ordinary scenes. Will exchange good work only. Class 1.

2220X—H. W. Terhune, St. John, Wash.
Post cards. Class 1.

2344—P. S. Hunt, Valdez, Alaska.
Class 2.

2484—John H. Vale, 609 E. 1st Ave., Denver, Colo.
Lantern slides only, from 5x7 negatives of landscapes, historical and geographical subjects; will exchange for subjects descriptive of the U. S. Class 1.

CHANGES OF ADDRESS.

518—E. W. Sawyer, 45 Dundonald St., Toronto, Canada.
(Was Springfield, Ohio.)

1634—Chas. A. Koch, Marble, Colo.
(Was Collbran, Colo.)

1746—Ben W. Ward, Highland, Cal.
(Was Seligman, Ariz.)

1878X—Miles J. Breuer, 1379 East 57th St., Chicago, Ill.
(Was Austin, Texas.)

1888—Edw. J. Perkins, General Delivery, San Antonio, Texas.
(Was Haines, Alaska.)

2129—M. H. Morris, 708 So. D St., Tacoma, Wash.
(Was Embarrass, Wis.)

2173—George M. Pease, 8401 Wade Park, Cleveland, Ohio.
(Was 4810 Dennison Ave.)

2292—J. R. Dishington, 732 Wisconsin St., Racine, Wis.
(Was 612 12th St.)

2352X—K. L. Stegner, Beardsley, Minn.
(Was Fruitland, Idaho.)

2429—H. Edward Fry, 2149 Conlyn St., Germantown, Philadelphia, Pa.
(Was 1746 Pacific St.)

2431—Wm. G. McCormachle, Route 2, Fordville, N. Dak.
(Was Medford, N. Dak.)

WITHDRAWALS.

1974—Charles Weidner, 787 Market St., San Francisco, Cal.
On account of lack of time.

Missouri—J. F. Peters, 6220 Berthold Ave., St. Louis.

Club News and Notes

AUCKLAND CAMERA CLUB.

The Honorable Secretary, G. O'Halloran, Junior, has sent us a syllabus of the subjects for illustration for the regular monthly meetings of the Auckland Camera Club, each member being expected to bring to the meetings a print of one of the two subjects of illustration designated for the particular meeting. Beginning with the May meeting, the subjects run in pairs, as follows: Mist, Along the Water Front, Fallen Leaves, Silence, A Winter's Day, A Portrait, Stormy Weather, A Fairy Tale, Springtime, Auckland City, In Forest Glade, The Silent Sea, Night, A Dusty Road, Yachting, Cascades and Waterfalls, About the Heights, In a Garden, Sunshine and Shadow, Still Life, Harvesting, Smoke, Seascape, and Home Life. We publish the list in full, believing that it offers a valuable suggestion to clubs that are casting about for some method of bringing their members together into closer acquaintanceship and interest.

LOS ANGELES CAMERA CLUB ELECTION.

The following officers have been elected for the ensuing term by the Los Angeles Camera Club: President, R. S. Crandall; Vice-President, H. C. McClung; Secretary, T. K. Adlard; Treasurer, A. H. Lacey; and Trustees, J. B. Ward, F. W. Kennett, and A. L. Cavanaugh, all being re-elected officers except the last, who becomes a Trustee to fill the vacancy caused by Mr. Adlard being elected Secretary. The Club is rapidlly increasing its membership, and with revised and amended By-Laws, is enjoying new enthusiasm and advancement.

Fraternally,

T. K. ADLARD, Secretary.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

RIGHT ON THE JOB.

The picture herewith shows some of the newspaper boys who were on the ground when Colonel Roosevelt arrived June eighteenth. One can see that most of them carried their police passes in their hats, while another important feature is the

number of Graflex cameras in evidence. The picture speaks quite strongly concerning the popularity of this excellent camera for newspaper work, a line in which the photographers on the metropolitan dailies are conceded to be experts.

"DRY PLATES AND COLOR FILTERS FOR TRICHROMATIC WORK."

The above is the title of a booklet by R. James Wallace, Director, Research Laboratory G. Cramer Dry Plate Company, for the information of those interested in trichromatic or three-color work, particularly the photo-engraver. Mr. Wallace, formerly instructor in photophysics at the Yerkes Observatory, University of Chicago, is too well known to need an introduction by us. The contents of this booklet, some forty-two pages, is the result of a considerable amount of theoretical study of the physics and chemistry of the subject, but also comprises the results of a vast amount of practical experience in tri-color work. In it is contained a vast amount of practical material, much of it not contained in any other book yet published. This is particularly the case in the matter with reference to the aberrations introduced by the filters when interposed between the lens and the plate, or between the lens and the object being photographed. The booklet will be furnished upon request to Research Laboratory, G. Cramer Dry Plate Company, St. Louis, Missouri.

ERECTING NEW BUILDING.

A large new building is being erected by Burke & James, manufacturers and jobbers of photographic supplies, at the northwest corner of East Ontario Street and Fairbanks Court. At the East Ontario Street entrance an imposing vestibule, finished in Italian marble, leads to the central stairway. The structure will cover 194x100 feet, and was acquired through the Bowes Realty Company. Twelve years ago the firm employed only eight persons in a small room, while now it has three factories at West Jackson Boulevard and South Desplaines Street, where 200 persons are employed.

The above is an extract from a lengthy article in a recent issue of the "Chicago

News," and is accompanied by a two-column reproduction of the architects' drawing of the handsome six-story building being erected. Burke & James are to be congratulated upon the well merited success of their business, as indicated by this handsome and substantial home.

"FAULTS IN NEGATIVES."

This is a title used on a very instructive booklet issued by the Imperial Dry Plate Company, of England. It treats quite fully of the faults and failures encountered in negative making, and explains very clearly how they can be avoided. On page 18 is given a list of "Don'ts" that any amateur would profit greatly by reading and taking to heart in his work. We believe we know something about the matter of interesting reading for the amateur, and this booklet should certainly have a large demand. The American agents for Imperial products will gladly send a copy upon request. Drop a card and get one. The address is, G. Gennert, 24 and 26 East Thirteenth Street, New York.

"PHOTOGRAPHING MOVING OBJECTS."

Mr. Freudenheim's article, under the above title, in our June issue, has brought several inquiries as to the address of the writer, the correspondents wishing to ask concerning the particular lens used. We are advised that the lens used was a Velostigmat, made by the Wollensak Optical Company, of Rochester, New York. This lens is one that has given the best of satisfaction in the hands of many experienced workers, having speed, definition and covering power that enables it to meet exacting demands.

A NEW LENS CATALOGUE.

Write for the new illustrated catalogue issued by the Rodenstock Optical Works, of Munchen, Germany. Copies can be had from the American Agency of Jas. Frank & Son, Augusta, Georgia. The new catalogue contains numerous testimonials from professional workers all over the country, and shows the growing popularity of the new lens, the Anastigmat, "Eurynar."

THE SYLVAR CAMERA.

One of our subscribers, a newspaper worker in New York, has sent us several fine examples of speed work done with the Sylvar camera, a compact, handsome camera, fitted with a lens working at f-6.8 and a compound shutter having a speed of one two hundred and fiftieth of a second. The 3¼x5½ size weighs less than two pounds, and is a trifle over an inch and one-half in thickness when closed. The bellows and bed have double extension, and the ground glass and focusing hood folds flat and flush with the camera when not in use. Our correspondent writes that this camera is not only very popular with the Eastern amateurs, but newspaper men are finding it well suited to their wants. Write the makers for descriptive circulars. G. Gennert, 24 and 26 East Thirteenth Street, New York.

NEW PHOTOGRAPHY.

President Bancroft Thinks Positive Exposures Will Be of Commercial Use.

Rested from the trials of Monday's journey to San Francisco more than two hundred members of the American Chemical Society gathered in the Colonial ballroom of the St. Francis Hotel for the opening session of the Forty-second Annual Convention. The meeting was called to order, and Arthur Lachman, in behalf of the California branch of the organization, made a brief address of welcome, to which President W. D. Bancroft responded.

In his talk, Mr. Bancroft indicated California as the world's greatest field for development in scientific and other lines, and predicted for San Francisco a remarkable future, painting it as the "ultimate empress of the earth, with other great cities as tributaries."

President Bancroft opened the morning's discussions with an illustrated address on positive photography, in the introduction of which he stated that the subject, although of no practical value as yet, was of considerable interest. In the beginning he sketched briefly the development along photographic lines and told of how the first theories in connection with positive photography were evolved from exposures taken of the sun. Positive photography he explained simply as the taking of the picture direct on the photographic plate instead of taking the usual "negative" or reverse from which ordinary pictures are printed as positives. He said that several snaps were taken of the sun with an ordinary camera, the time of the exposures being lengthened at each trial. When the first plate was developed it showed the usual negative, that is, the sun appeared as a dark spot on a light background. As the time of the exposure was lengthened the plate when developed showed signs of becoming positive, and after several trials an actual positive plate

was made, the sun appearing a white spot. For the sake of experiment more exposures were taken, but as the time was lengthened beyond that when the plate was found to be positive it was found that the tendency was toward the negative again. This alternation between positive and negative, according to the length of exposures, led to a great deal of theorizing. He showed many interesting lantern slides of the different phases of positive photography. He dealt with the so-called "black lightning," and demonstrated how the photographing of lightning could be made black or white at will.

He closed with the statement that it was his belief that positive photography would eventually lead to the ability of the every-day photographer to take snapshots indoors or in subdued light at will without the use of flash powder.—San Francisco "Call."

TANK DEVELOPMENT.

In the April number of "Studio Light" we published an article on the importance of using clean trays, plate tanks, etc.

As a result of that article we received the following letter from a Minnesota photographer which we believe will be instructive and interesting to our readers.

Park Rapids, Minn.

Eastman Kodak Co.,
Rochester, N. Y.

Dear Sirs: I wish to express my appreciation of your magazine, "Studio Light." It has more real tips and ways to bring practical results than any magazine I ever read.

To explain just one experience I had this week. I came to work Monday feeling blue, as my Saturday negatives were flat and fogged and I was about to give up in despair, when I decided to go to the postoffice and get my mail. Well, I received the April "Studio Light," and as I always do, just sit right down and read it clear through and if there's any good tips for results either in quality or business getting, I am not slow in using them.

I ran across the article, "Give Quality a Chance," and when I read it you may be sure I found out what was the matter with my negatives. I had a large bottle in which I had put 150 ounces of water and 16 ounces of Muriatic Acid C. P. to clean out bottles and trays with, so I went to the dark room, got the tank and plate rack and the acid solution and filled the tank. Well, in about a minute my tank was as clean as a new one, all the stain gone and no work at all. I poured the solution out, filled the tank with water and let it set an hour or so, mixed up some developer and put in the rest of the plates I had left from Saturday, and say, I had results that were well worth my time in cleaning the tank.

I wouldn't sell my plate tanks for $100 if I could not get any more like them, they save worry and they get results.

Say, that Crystal Pyro is fine—just keep the good work up and give us crystal Hydroquinon and it will help some, too.

Sincerely yours,
E. R. PERSHIN.

You will notice that Mr. Pershin used diluted muriatic acid. Be sure to dilute it before putting it into the tank or the metal will be attacked and cause corrosion. The tank should be washed well before being used again.

Long continued use of the plate tank without cleaning collects a coating of foreign substance which affects development. In some cases the development is slow and the resulting negatives are weak —then again a chemical fog is noticeable in the negatives.

One of our demonstrators advocates the following as an easy way to keep the plate developing tank clean.

No. 8 Acetic Acid.....3 oz.
Water .....3 oz.

Place cage in tank, pour in this solution, place lid in position and shake well. The tank will come out like new. This should be repeated about once a month.

He has found that fogged plates as well as streaks of apparent fog running in lines across the plate often comes from a tank that has not been taken care of properly.

A tank that is liable to cause this trouble will be found to have a whitish yellow deposit on the cage and inside of tank showing plainly when dry. This treatment removed the coating, after

which the results were perfect. Perfect results follow the use of a clean tank and it is not reasonable to expect results unless the tank is clean. No more reasonable than to expect results with an unclean tray.—"Studio Light."

"PHOTOGRAPHING IN OLD ENGLAND."

The above is the title of a handsome, 4to volume; cloth, decorated, full gilt, that reached us recently. The sub-title reads: "With Some Snapshots in Scotland and Wales." It is illustrated with a wealth of reproductions of handsome photographs; and, in addition to the instructive text, which takes the form of letters from a traveler, there is a chapter giving practical hints and suggestions to those intending to do photographic work on a like tour abroad. The author, W. I. Lincoln Adams, is well known to the photographers of the country as having long been the editor of "The Photographic Times"; in fact, the chapters making up the book were written as letters to the readers of that magazine in 1909, and published therein, together with most of the illustrations. The book is one that will appeal to all photographers, and particularly those interested in England or in trips through that country. The price is two dollars and fifty cents. Published by the Photographic Times Publishing Association, 135 West Fourteenth Street, New York.

THE NEW SENECA BOOK.

Just too late to mention in our last issue, came a copy of the handsome new Seneca Text Book Catalogue, one that the reader should send for at once as the edition is none too large, and the book is one that will interest anyone who likes beautiful pictures or who cares for photographic information. The cover is a beautiful example of lithographic color work, the illustrations are reproductions of photographs of fine quality, and the text is clear and instructive. Our readers will be supplied with a copy upon request; simply drop the firm a post card and ask for the new seventy-six page text book catalogue, addressing it, Department H, Seneca Camera Manufacturing Company, Rochester, New York.

IS IT SATISFACTORY?

Take this season's work—are you satisfied with your achievements in picture making? Are you really pleased with your bunch of small prints, all jumbled together, some good and some bad? Few amateurs are, and the reason is that the usual collection of small prints has little pictorial value and is of interest only to the one who has taken them. How much more satisfactory would be a few well-chosen enlargements from some of your best films, tastefully framed or mounted. They would be a real source of satisfaction and something worth while to show your friends. A small album of well-made enlargements would give them a better impression of your ability as well as providing them more pleasure in looking at your work. Often a print, one that is not pleasing as a whole, makes a beautiful picture when the portion of real pictorial value is selected for enlargement and the objectionable parts left out. Run over your small prints and see if some of them will not make pictures if properly handled. Perhaps, by darker printing to get a sunset effect, or by diffusing to avoid too much detail, or with a little dodging and careful trimming, you may secure a prize winner. Prize-winning pictures are seldom straight prints, and many prize winners have been made from negatives no better than some that you have laid away. If you are not certain of your ability to do this work yourself, send it to some firm who makes a specialty of high-class finishing for amateurs and professionals. Such a firm is the Photo Craft Shop, 849 Ellis Street, San Francisco. They are popularizing the use of enlargements by the amateur, and trying to teach him the beauty of the work as applied to his own negatives. They are making high-grade enlargements at very reasonable prices. They will, if it is left to them, do the trimming, the dodging, and the framing, in a manner that will be in harmony with the subject and the paper used, something that all framers do not understand. The Photo Craft Shop makes a specialty of this work, and can satisfy the most critical. Their recognized skill combines to satisfy their customers and assures them an ever-increasing business. Look up their advertisement.

Vol. XVII No. 9 SEPTEMBER, 1910 Price, 10 C

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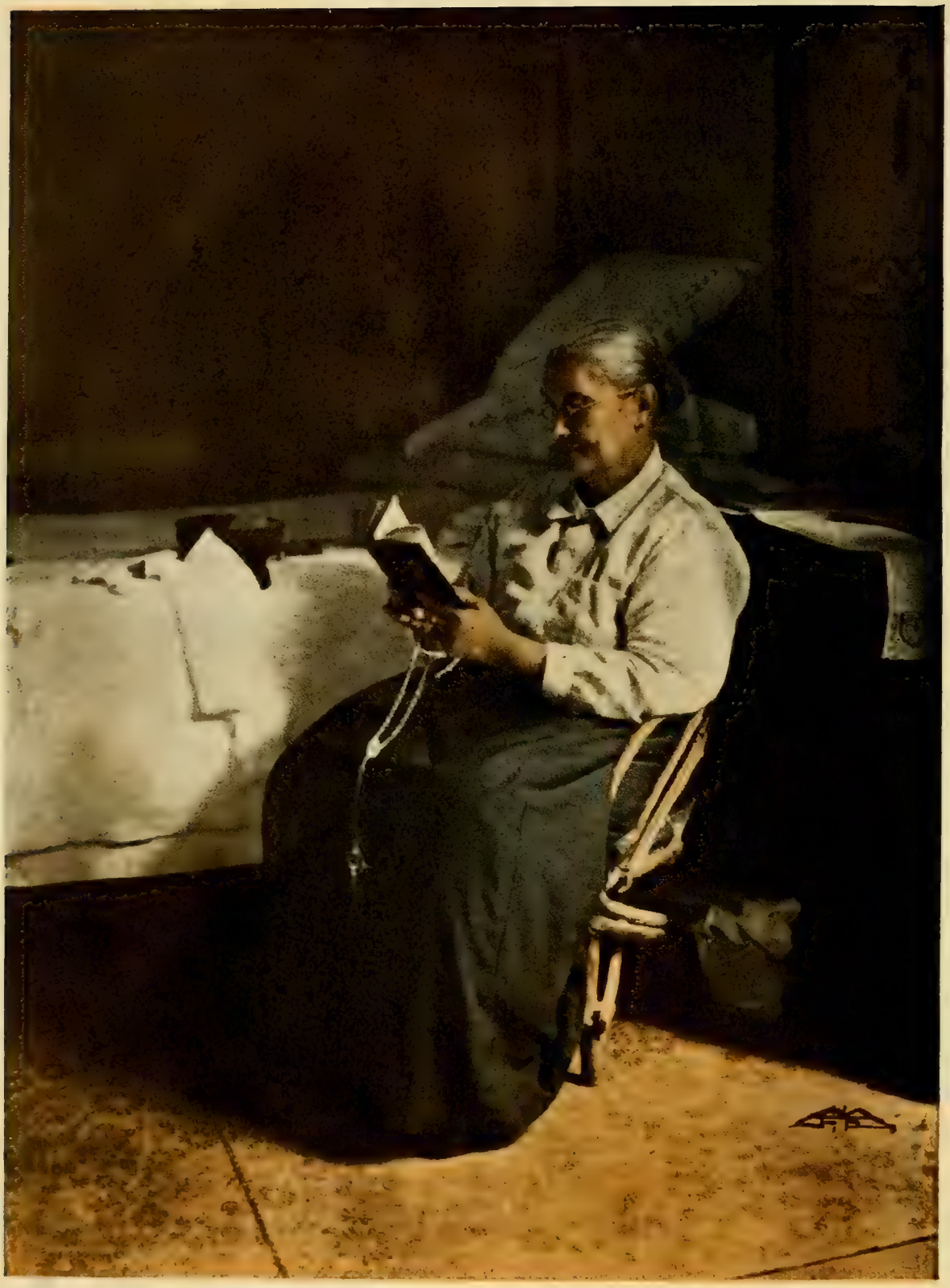


"MAMA-GRANDE"
By F. E. MONTEVERDE

Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1910. No. 9

Home Portraiture as a Business

By Kenneth Alexander

Our Prize Article for September, Winning a Wold Air Brush

In conducting my business, I try to follow, as far as possible, along the lines pursued by the successful men for whom I have worked. And, in taking each one in turn and carefully analyzing their success, as a whole, the conviction that purely good business methods have constituted their good fortune, forces itself upon one. Good work, of course, counts as an important factor, but at the head of the list stands that one prime qualification, business ability. The owners of many of the large studios in Europe, simply hire a good operator and devote their own time and energy to the purely business end of the establishments they conduct.

It is wise to avoid, absolutely, in one's dress and manner, anything that savors of pose or fadishness. In the long run it impresses your customers much less favorably than does a sane and conventional garb and a natural and sincere manner. One can do just as good work and be just as much of an artist, without the assistance of long hair, a flowing tie, and like properties. If there is a desire to play a part, take some lessons in a dramatic school and become a regular actor. It is much more consistent.

Having a specialty is a much stronger means of appealing to the public, in addition to the simplification which it brings to one's work. In the larger cities we have men who make a specialty of children's pictures, others whose studios are devoted practically to theatrical people; even our Pirie McDonald who does "Portraits of Men Only." This last seems strange in the face of the well known disinclination of the men to be photographed; but, even in their case it is only a matter of creating a demand. In his case it was the right man taking hold at the right moment, and success followed.

My own specialty is home portraiture; my studio is never used. It is a great boon to be able to get away from the blaze of the studio skylight and its old furniture and fixtures, and enjoy the feeling that each new set of conditions will provide a surprise. It puts one on his mettle,

and incidentally, it acts, this feeling of expectation, as a stimulant in keeping up the necessary supply of energy. One finds, also, that the customer is met on a more agreeable footing in his own home. There is an entire absence of that feeling of strangeness and often reserve that characterizes the visitor to a studio, and this makes the securing of a true portrait, a good "likeness," much easier. The conditions are more favorable. If the subject is a woman, gowns and hats can be discussed and the most becoming one selected for the picture. Doing this allows one to study the subject and still further increase the possibilities of securing a natural pose and expression in the picture. With the man one must work more quickly, troubling him as little as possible. Move the camera rather than ask the subject to change his position, and remember he is generally in a hurry to get to his office; a haste born of habit perhaps, but to be respected just the same if one wishes to avoid an annoyed expression. If possible, secure a little interest in your work or in some line of conversation that a tentative remark or two may discover, that varying expressions may be noted and taken advantage of if pleasing. But work quickly. I often make such pictures in offices and find the work very interesting and satisfactory.

Good home portraiture is of course more difficult than studio work and that is one reason why so few have taken it up and made it a success. One must first make up his mind to avoid trying to get studio lighting. To get it is well nigh impossible in a majority of cases, and besides, there is more likelihood of getting an interesting picture with the lighting otherwise than according to rule. If one will just stop to think a moment he will realize that ordinary room lighting is the one most natural, the one under which he sees and studies the faces of his friends, the one light that gives him the face as he most often has it before him. In the dark-room is where a great deal of care should be given. Develop each negative separately, never having more than three going at one time. Use a soft working developer and modify it for the different conditions. Remember that when working by a small source of light, the movement of the sitter less than a foot will make a great difference. If the subject has worn a white dress one can hold it back by washing that part of the plate once or twice during development. A good reducer like Farmer's ferricyanide and hypo, comes in very handy at times. If a part holds back as dark hair often does, a finger dipped into a warm alkali solution and touched on the place will save it from being a dark mass.

Pick out the four best negatives and retouch them and submit proofs from four others as well. When the order is secured, get the correct values in the print if they are not already in the negative. Flow the glass side of that part of the negative where the too dark hair is with ground glass varnish and when it dries, scrape away the edges to the desired shape. This is much better than using blue water color as it is more even and does not produce smoky and foggy effects. Of course, the negatives are made slightly thin as it permits of more manipulation of this kind.

A HOME GROUP By KENNETH ALEXANDER

In the past, working in the studio, I used a home-made exposure chart with perfect success, but we now have Steadman's exposure method, which is an improvement over anything I have so far seen. It is simplicity itself and makes the matter of correct exposure, a particularly distressing one in home portraiture, one of absolute uniformity. It is this lack of right exposure that makes good home portraiture so difficult. Slight under-exposure encourages over-development, which runs the highlights all together, destroying the modeling; while over-exposure has its usual ill effect. The method was quite fully outlined in the April number

of "Camera Craft," so I need not dwell on it here, particularly as Mr. Steadman's new booklet will shortly be out. It is certainly indespensable to the home portrait worker. Even the worker under a skylight could use it to advantage. If the light is at all variable, through the skylight being in a crowded location, the time required to occasionally test the light will not be one-third that spent in faking poor negatives in the printing room.

My own camera is a regular 6½ x 8½ view box, with several lenses for varying conditions. The most generally useful is a 3D Dallmeyer working at f-5.6, that I use whenever possible for portraits, and always for groups. The next most useful is a 9-inch anastigmat that works somewhat faster. I find it unadvisable to use anything less than 9-inch focus on account of the distortion, and use the 9-inch focus only when it is absolutely necessary on account of the space being limited. It is fine for single figures and gives brilliant results. The 6½ x 8½ size is preferable because it is a good portable size for an outfit and my customers like the size as a happy medium. The 8 x 10 size is too overpowering and a 5 x 7 somewhat small. The kit is carried in two suit cases and always includes at least twenty-four plates. Twelve are used on a sitting and almost invariably one finds that there are two sittings to be made, even when the appointment is for only one. All prints are made on platinum paper as the negatives vary in quality as the effects aimed at are variable, and that paper is most suitable to the requirements. Besides, there is not that disagreeable inclination to curl and cockle as the weather changes that is so characteristic of some emulsion papers.

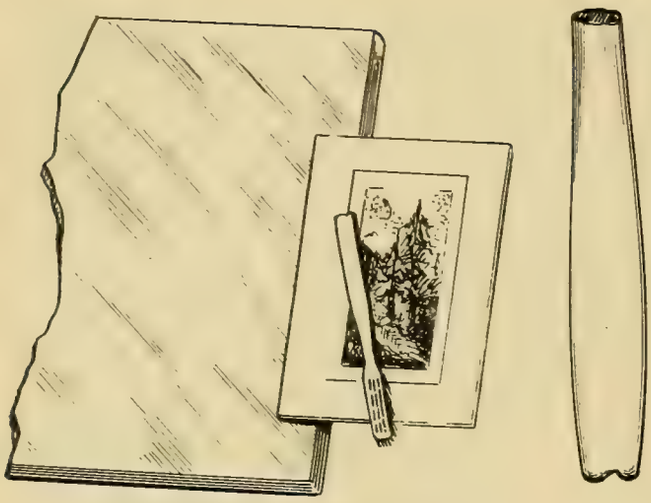
Doing work at the homes of one's patrons, a good price must be charged. All the added expense must be paid for and I expect my customers to pay for it. But doing the work at the homes brings the photographer into a closer and more intimate touch with the sitter and consequently a deeper interest is aroused in the work, the poses are more natural and the general bearing of the subject entirely different from what it would be at a studio. The mental attitude is also different. Your customers feel that you have come to them, not that they have gone to you, and the charging of a good price is an easy matter, particularly if the work is of the best possible quality. I charge thirty dollars a dozen, one extra position for every six ordered, and two dollars extra for any additional positions. That price is not arrived at by any hap-hazard guess, but is calculated from the cost of producing the pictures under the actual conditions which I work; and in addition to this cost of plates, paper, retouching, and the rest, there must be pay for the dull days and the years spent in acquiring the necessary knowledge and skill. These last are paid for in other professions, but too many photographers only figure a few cents above the actual cost, and let it go at that. Nine out of ten of them land just where they started, and, the unfortunate part is, they hurt others as well as themselves.

Designs are worked into the negative in much the same manner as described in a former prize article in "Camera Craft," there being hardly

A HOME PORTRAIT By KENNETH ALEXANDER

any limitation to the varying effects that can be secured in this way. The more knowledge one has of drawing the more one can accomplish in this branch of fakeology.

The prints sent with this article are samples of everyday work, made in the homes of my customers, and are not specially selected ones. As can be seen, the light is well from the front with a dark ground behind. A light screen was used in each case to reflect some light into the shadows. The prints are made in the center of a 9 x 12 sheet of platinotype paper with a wide tint border around, and a little extra finish is



(Notch shown larger than necessary.)

given by depressing the print all around. The simplest way to do this last is to take an ordinary toothbrush handle, file or sandpaper down the end until flat, and then make the smallest kind of a notch in the middle. Lay print face up on the edge of a piece of glass and run the notched toothbrush handle around the outer edge of the tint, using a fair amount of pressure. Too much force will cut it right through, so use care. Go all around, and you have a depression similar to that made by the heavy presses used in making an impression from an engraved steel or copper plate. In the illustration herewith the notch is shown too deep, but a little experimenting with scrap paper will show one what is wanted.

I find that the largest number of people like and appreciate the kind of pictures that are along those lines followed by painters of the old days, such as Reynolds, Gainsborough, Lawrence, and Romney. With other fine qualities they all gave grace and spontaneity to their work and their pictures are absolutely free from any suggestion of anything catchy or tricky. We all realize, of course, that it is difficult to come even within a long ways of the fine things these painters did, but we can find a world of information in good reproductions of their work. One should study them until he can appreciate just why they are good; and, doing this, he will find that they will have an ever potent effect upon his own work. This study of good reproductions of the work of the best artists becomes particularly helpful when one is making pictures in a low tone; as, by keeping them in mind, one avoids going too far down in the scale. Some low tone photographs that I have seen could never be translated into natural colors under any ordinary conditions. We must remember that in nature even the darkest of shadows contains some vibrating light. One photographer above all, Histed of New York, seems to have realized this. Look at some of his prints; even a painter cannot call his pictures bad names. No matter in what key of light they may be, the relative values are all there. He is one of the few photographers that are getting large prices with a quantity of customers; the last being more important and more difficult to secure than the first. High prices are of little value unless accompanied by a sufficient volume of business.

The hardest proposition of all is to know in which direction to look for business, especially when one remembers that there are two or three photographers' show cases in every city block. Some photographers keep up a constant amount of invitational work; as a rule, giving some special reason for the invitation. Perhaps it is a future exhibition of the portraits of the children of the city, or a collection of the women of the State, with an offer of one free copy; all, of course, in the hope of

securing an order. All can see that it is good advertising. Results should be judged from the general average as numerous sitters will simply keep the one free print. I think the pleased customer is the best business getter. I sometimes receive letters worded much as follows: "The pictures arrived and we are very much pleased. When in the city again please call up Mrs. ——, Mr. ——, Dr. ——;" possibly mentioning three or four names. Thus I secure right of way in three or four new homes. Again, if I get an inquiry I follow it up with a portfolio of sample prints left at the home. I try to forget all about my disagreeable customers; they will never remain permanent with any one and are not worth troubling about. But it is a real pleasure to do work for people who are going through life in a broadminded manner. Strauss of St. Louis keeps a record of the people who ask timeworn questions, "Will I break the camera?" and so forth. I wish I could remember all the witty and funny things I have said to me. Not so long ago I was photographing a very striking bride who had an idea she was uninteresting. I happened, when changing my lens, to mention that the one I was about to use focused sharp on one point, the rest being soft and diffused. A moment's pause, then: "Oh! that is just the lens for me; please do focus on my foot."

THE VILLAGE SMITH. By F. A. SCHNEIDER.

One Year With The Camera

By J. Clarence Norton

Illustrated by the Author

PORTRAIT OF THE AUTHOR.

IN May, 1909, I concluded that I needed a camera; in fact, I believed one was necessary to my happiness. It came about in this way; my sister-in-law was visiting us, and she displayed some excellent views which she had taken, the developing and printing being done in St. Louis. But in trying to repeat the performance during a typical warm spell here in Southeast Kansas the following month, June, it was found that the excessive heat had caused the emulsion on the cartridge film to melt and stick together. At least, that was the explanation made by the finishers in St. Louis. No doubt this would never happen again and I really believe was only due to the loaded camera being left in the broiling sun, but with the caution of the novice who does not realize these things, I decided I must have a camera using plates.

Novice is a mild word to use in this connection. I knew absolutely nothing about photography, except a hazy idea that a print was made from a negative, which in turn was a plate that had had some mysterious treatment; and, that the lens was the eye of the camera that saw and recorded the picture in an even more mysterious manner. I did not know that there were large firms dealing exclusively in cameras and photographic supplies, and that there were such journals as "Camera Craft," devoted exclusively to the interest of photographers, be they beginners or proficient workers. In fact, it would be impossible to imagine one more ignorant of the first principles of the craft than I, at that time. The many blunders that I made, discouraging as they were, finally led to success. By November, six months later, I had printed and sold fourteen gross of post cards at seventy-five cents a dozen, one hundred and twenty-six dollars, besides having a gross or more of fairly good prints for myself. When it is understood that I had to learn it all without assistance, and that the work was confined to spare time Sundays and

evenings, my success should be an encouragement to other beginners and my blunders should be interesting if not instructive.

But to start with my story, the first thing was to get in touch with some firm selling cameras and supplies, and the only thing for a farmer to do was to write to one of the large mail order houses. I wrote to two of them; both sent catalogues, and one sent a special, sixty-four page list, confined to photographic supplies. Reading this last over I learned the difference between a box camera such as I had seen my sister-in-law use, and a view camera. I finally sent in an order for a four by five Conley camera, with rack and pinion focusing movement, reversible back, wide angle and anastigmat lens, the latter working at f-6.8, twelve plate holders, Bee meter, developing tank, developing powders, toning and fixing powders, and many other things that I thought I needed. My selection of a tripod had a tilting arrangement at the top and to this I attribute the fact that out of over three hundred and fifty negatives I now have, there is not one in which the picture is not square on the plate and the subject centered correctly. I mention this because I was recently given about two hundred negatives that an old friend had taken in Africa, and found that in every instance the subject matter was much too high up on the plate. He must have used a finder instead of a focusing screen, and the finder was not accurate.

My camera came early in July, with the stop set at U. S. 32, and the shutter set at one one-hundredth of a second. As I knew nothing about it, I did not change anything, and all my work in July, August and September was done with that stop and at that speed: and, strange to say, the views were all good. They were all taken out of doors and under a cloudless sky. But when the sun got further south in November I began to learn something about stops and exposures, but that will be told further on.

I happened to have here on the farm a large potato storage warehouse, built of rock. With the double doors and ventilator closed, inky darkness resulted, and it was in this building that I established my darkroom. The top of an incubator made a good table and a nearby shelf carried the bottles and other equipment. The temperature of this room never rises above seventy-five degrees Fahrenheit in summer or falls below thirty-four in winter, so I find it ideal for a dark room and as a place in which to store supplies. I had not the least trouble in loading and unloading the Conley holders and I have never had a plate injured by finger marks or through being fogged.

As the developing tank held twelve plates I imagined that it would be more economical to make twelve exposures so that they could all be developed at once. It did not occur to me that in case of a failure it would be much cheaper to learn my lesson with one plate than with a full dozen. So I made twelve exposures; and, like all beginners I suppose, used the focusing scale instead of the ground glass, even though I had to pace off the distance each time. I imagined that the ground glass was simply to show what was to come on the plate when it was exposed.

Fortunately, the scale was correct, and the plates being Seed's 27, the stop being set at U. S. 32 and the shutter at one one-hundredth of a second, just as it reached me, I secured almost correct exposure.

But the instruction book that came with the camera had nothing to say about tank development; so I had only the printed circular that came with the tank, and all it said was: "Develop for twenty minutes, then wash." There was a picture showing the operator pouring the developer into the tank with an eight ounce graduate. So I put my plates in and poured in the developer in the same way. I found it took three graduates full to fill the tank, and later I found that each plate carried a high-water mark where the contents of each graduate had stopped. After that I used a quart bottle and kept the solution in a steady stream until the tank was full. But I did not know that the plates had to be fixed. To me it was simply, "develop twenty minutes, and wash." As soon as the twenty minutes was up I rushed to the door with the plates and held them up to the light, one at a time. With a

FROM MY SECOND ATTEMPT. FROM MY THIRD ATTEMPT.

great shout of joy I called the entire family to inspect the pictures on the plates. They were splendid, and for the next few minutes I basked in the praise that was showered upon me, the wonderful camera that had made all this possible coming in for its share. I was in the seventh heaven of delight at the prospects of producing prints so easily and quickly.

The negatives were washed and after drying for a while, my sister-in-law coaxed me to make some prints as she was leaving that afternoon and wished to take some of the views home with her. I did not know that they should dry until the coating was hard; so, with the entire family watching the successful photographer earn added laurels, I placed a negative in the printing frame, a printing-out post card on top, closed the frame and placed it in the bright sunlight to print. Happy anticipation for about five minutes and then the frame was opened and the card pulled off. I was dumbfounded. Instead of the pretty view which I had expected to find on the card, as a matter of course, I found that in pulling

it off I had removed most of the gelatine emulsion from the negative. It had stuck to the card and that card certainly was discouraging. Only my unsympathetic sister-in-law was unkind enough to laugh, and to this day I have not forgiven her. The shock was great; but I rallied and remembered that I had eleven more plates with nice, clear pictures on them. I allowed my sister-in-law to proceed homeward without coaxing her to delay in order to get the coveted post cards, and then I proceeded to dry the remaining eleven negatives for forty-eight hours. I was sure they were dry and then I put my printing frames at work. I exposed them to bright sunlight all day, and yet no pictures, despite the fact that pictures could be seen quite plainly when the plates were held up to the light. I printed them all the next day, and yet no pictures. To fail when success seemed within my grasp almost made me weep.

I wrote to the mail order house, explained just what I had done, and asked for advice. In about a week it came. "Fix the plates in hypo after developing, being careful not to expose them to the light until they have been in the fixing bath for a minute or more. Keep them in the bath twice as long as it takes to cause the disappearance of the creamy color." This was a revelation. The book said nothing about tank development and the makers of the tank did not go to the trouble to tell the novice anything about fixing the plates. But I had discovered the trouble and once more took heart. It was then the latter part of July and I particularly wanted some pictures of several colts and show horses for the County Fair that was to be held September tenth, and every failure meant a week's delay as I had no time for the camera except on Sundays. Fortunately, weather favored me, so the first Sunday in August I again made twelve exposures on the colts and horses, using the camera exactly as before. This time I fixed the plates and after washing them, put them overhead in the creamery building to dry for the night. The first thing in the morning I looked at my treasured negatives and was shocked to find them stuck full of little gnats and ruined. Wherever a gnat had stuck to the wet gelatine, the coating had shrunk and pulled away in drying, leaving spots on the plate, some of them as large as a pea. I only printed from one of the negatives and a print is sent herewith. The poor colt has some very bad ulcers on his body, even the ground on which he lies is afflicted. But with this negative I learned to print and finish post cards during the following week.

This second failure put me back another week and my family and friends began to clamor for post cards to send to their friends. So the following Sunday I tried again; and, this time left the plates in my potato storage dark room with the wooden doors open and the screen doors closed. The potatoes had left a fine dust all over the floor and during the night this was blown all over the plates, sticking to the wet gelatine, causing a few thousand small pin holes on each. And again I printed from but one of the twelve, and again I was in the depth of despair. It was the middle of August, the Fair was to be held the tenth of September, I had only Sundays on which to use my camera.

The next twelve exposures I developed and put to dry in the house with mosquito netting over them, at three in the afternoon. The temperature was one hundred and eight. Coming in to look at them at six o'clock I found that the films had melted and run down towards the lower end of the plates. I turned them around, hoping the film would run back, but it would not; and while the negatives were not bad, they were so much denser at one end that I gave up trying to print from them. I have since learned that I could get good prints by putting the thin end in the shade while printing.

It being only a few days to the Fair, I went all over the work once more, developing and fixing the plates late in the day, and after washing, putting them to dry under the mosquito bar and out in the Government thermometer shelter that is on my place. This ended my troubles, except that I learned that it was better to develop but six plates at a time; with twelve plates in the tank there does not seem to be enough space between to allow the developer to be removed perfectly before placing in the fixing bath.

When the Fair came I had only a few samples of my work to show, but I was sure I could make pictures. I took my horses, post card samples, and a supply of plates. The samples were in a neat frame with a powerful, four-inch reading glass hanging below, enabling vistors to my stalls to view the cards at their best. The result was that I booked an enormous amount of photographic work. I took snaps of the show horses, driving rigs, samples of grain, and many other things. I got so many orders and had so much work ahead of me that I was compelled to give up my farm work for a few days and get out these cards. These and the orders taken for pictures of residences, kept me busy up to November. I made about fourteen gross of cards; about a thousand of them going to a local store-keeper to be sold at five cents each, he paying me four cents each for all sold. The editor of our local paper was given some samples and he gave them a good write-up and ordered some pictures taken for his own use. The best seller was a card showing my thirteen-year-old son driving a thoroughly broken, sixteen-weeks-old mare colt to sulky, and my father, eighty-six years old, driving a twenty-eight-years-old mare to sulky; the picture representing the youngest driver and youngest horse, and the oldest driver and oldest horse on the American turf. The cards, showing both these right in motion, sold rapidly, as did views of the winning horses, taken while on the trot in the parade.

By November the sun was so far south that my pictures, taken at U. S. 32, one one-hundredth of a second, failed to print well, and it took me a month to find out what was the trouble. My Bee meter had laid in its box all this time and I had wished I had my money back that I had paid for it. But my failures caused me to study it carefully and now I never make an exposure without consulting it; and I always get good results. I opened the lens to U. S. 2 and found that it still made a good picture. I also discovered that I could get slowly moving objects as slow as one-tenth of a second. All my supplies bore the name of a well-

MY FOURTH ATTEMPT. MY FIRST LUXOGRAPH.

known manufacturer and I wrote for a catalogue. In this I found the name of a photographic magazine and sent for a copy. In this last I found a cut of the Auto-time shutter scale, cut it out and pasted it on the bed of the camera, and found it as much help as the scale itself. I learned that there were several magazines devoted to photography, so I went to my local editor and he gave me a list of twenty-three, compiling the list from his directory. I wrote for samples and received about fifteen, among the first to arrive being "Camera Craft." I at once subscribed for it and two others. So rapidly have I learned from these magazines that it seems impossible that I could have so recently been so ignorant concerning things so fully explained by such excellent publications.

Learning to use my Bee meter I had no trouble making pictures in the shade, indoors, or any other place, something I had not been able to do before. Then I had entire confidence in my ability to take any kind of pictures. I have a beautiful trotting stallion that must be exercised,

A PORTRAIT OF MY FATHER. CAMP FIRE EFFECT A FLASH LIGHT. A PORTRAIT STUDY BY FLASH LIGHT.

so going five or ten miles to take a picture for one of my neighbors is a matter of no moment; it is the same as if he were next door. As winter came on I began to notice the extensive advertising of flash-light powder in this magazine. I got a sample of Luxo; and, using an Ideal, ten-inch pan, flash-light pistol, have made good negatives right from the start. I have never made a failure with it and would not do without it as a means of taking pictures at night.

This article is written, not so much to instruct others as to encourage beginners by showing them what can be done in one year by one who certainly was about the most unpromising candidate for photographic honors that could have been selected. I know I still have a whole lot to learn, but I feel sure that the future does not hold any larger measure of pleasure and satisfaction than I have had from my camera in the past year. My success may be greater, my earnings larger, but I can hardly hope for the same gratification that the past year has given me through my success under difficulties that all but caused me to give up the effort.

The Limit of Detail

All that can be effected with buildings, or indeed any other objects, is to convey distinctly an idea of nature. In a building, whether it be old or new, whether the stones composing it be regular or irregular in shapes, when sufficient is portrayed to show this, enough has been done; the likeness is not improved by exhibiting the portraiture of every stone, since the spectator only recognizes detail above alluded to in connection with the form; the number of stones contained in it being as little known to him as to the painter, the exact representation of all is not felt essential to a satisfactory resemblance.—J. D. Harding.

LEFT SIDE WALL: MAIN NAVE: BASILICA.
Dull rainy day; stop F-32; 5 seconds exposure.

The Basilica

With Illustrations by Harry Gordon Wilson

Close by is the Basilica or French Cathedral. And what a wonderful mediaeval edifice that cathedral is! It is ancient in its form, its towers, its cupolas, its peculiar roof, its vast proportions; it is the picture of some of those temples that one meets with in Spain or Germany. Interiorly it is all brightness. While the air of the past seems to cling to it, its white walls and gold decorations lend a richness to its appearance that serves to bring out in grander relief the numerous old master-works of art that adorn its walls. All the churches of Quebec—and there are many, for it is a city of churches—present the same clean, lively white appearance that seems to render them perpetually young, despite the years that have gone over them. Its construction was begun as far back as 1647; and mass was said in it for the first time in 1650, but it was 1666 before it was consecrated by Mgr. Laval de Montmorency, first Catholic bishop of Quebec, whose See extended from the St. Lawrence and the Arctic Ocean to the Gulf of Mexico, and from the Atlantic to the Pacific, a vast territory out of which over sixty dioceses have been formed. It is, in fact, the metropolitan church of North America. It was badly damaged by the British bombardment in 1759. In 1874, it was raised to the rank of a Basilica Minor. Its chancel or sanctuary is a copy of St. Peter's at Rome. The whole edifice is two hundred and sixteen feet in length by one hundred and eight in width and is capable of accommodating four thousand worshippers. It contains some of the most remarkable objects of historic interest and most valuable works of art on this continent, which

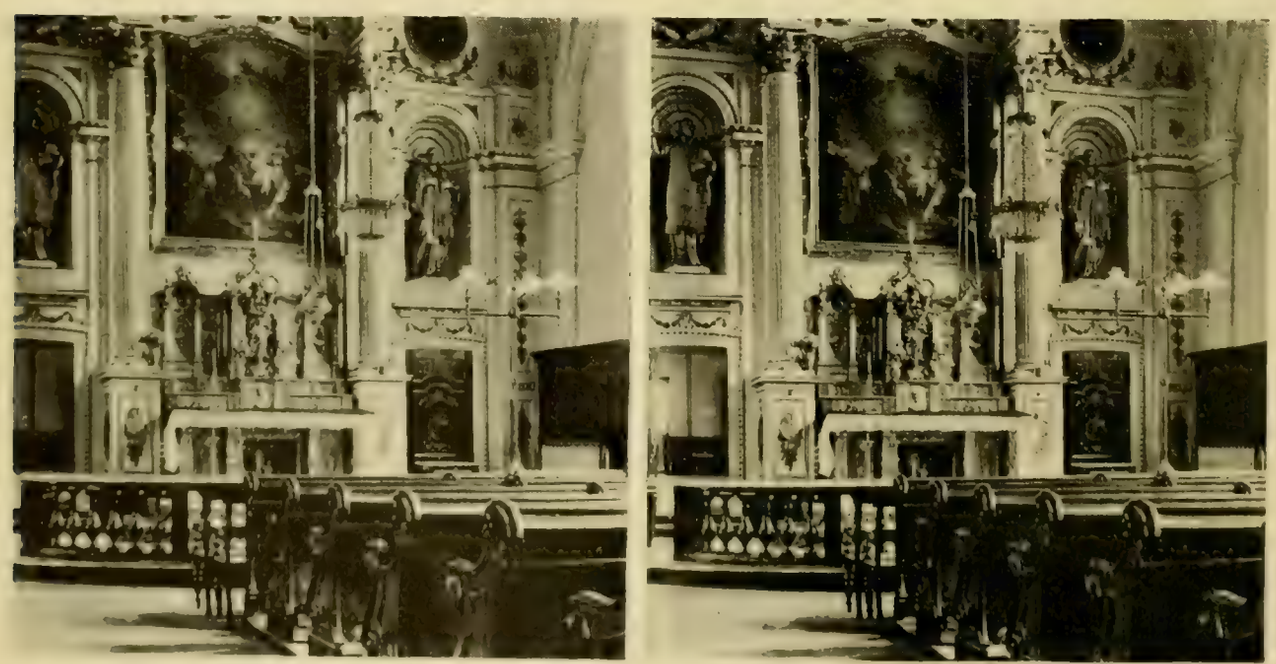
THE BASILICA: FROM THE ORGAN LOFT.
Dull rainy day; stop F-32; 5 seconds exposure.

were conveyed from France to Canada by Canadian priests after the Reign of Terror in 1793. These objects chiefly consist of paintings, vestments and sacred vessels. Some of the vestments were the gift of former Kings and Queens of France. The following are among the most notable of the paintings: The Conception, after Lebrun, by an unknown artist; St. Paul, by Carlo Maratti; Christ Attended by Angels; The Flight of Mary and Joseph, a copy of T. Hamel; Christ, by Van Dyck; Nativity of Christ, copy of Guido; Christ, Submitting to the Soldiers, by Fleuret; Pentecost Hymn; The Holy Family, by Jacques Blanchard; The Annunciation by Jean Ristout; Ste. Anne and the Tomb of the Saviour, by Plamondon.—"Carrell's Illustrated Guide of Quebec."

Art. Neither Execution Nor Imitation

A poet would think that a poor compliment had been paid him if his critic, by way of exalting him, would point out that he had evidently taken great pains and was very honest. In like manner, either a composer or an executant of a piece of music would be ill satisfied if no higher praise were awarded than honesty or painstaking. If painting is a Fine Art because it resembles poetry, the presumption is that a similar test should be applied. The presumption is, that the critic who points out that this subject is not faithfully imitated is dealing with a point of minor importance which cannot decide the artistic value of the work.—Parker.

"Even in portraits, the grace—and, we may add, the likeness—consists more in taking the general air than in observing the exact similitude of every feature."—Sir Joshua Reynolds.



LEFT NAVE: BASILICA.
Dull, rainy day; stop F-32; 5 seconds exposure.

Sixty Dollars For Two Cents

By Percy M. Reese, President Photographic Club of Baltimore

Illustrated by the Author

THE SOMERSAULT.

ALWAYS, it is human nature to want something for nothing, but it is not natural for the human to get it, often. At least that has been my experience in a somewhat extended period of observation; and it is therefore very pleasant as well as most surprising now to find that a letter written three months ago to "Camera Craft" has unexpectedly borne Golden Fruit, and made me the owner of something I greatly coveted, but felt I could not afford, in addition to the several cameras I already possessed, a "Number Naught Graphic;" and I am most happy to have this opportunity to express my grateful appreciation and sincere thanks to Brother Clute and to The Eastman Kodak Company.

A word first about luck. When I announced my winning of this prize to my fellow members of this club, to which I have belonged for many years, a dozen or more said, as often before, "Well, if you are not always the luckiest man I ever saw." Now, far be it from me to disparage luck, to say there is no such thing. We have all seen and experienced luck, and ill-luck; but winning this prize was neither one nor the other. It has been said that genius is only another name for an unlimited capacity for hard work, and the hard luck of very many calamity howlers is only a series of wasted opportunities. I pointed out the issues of "Camera Craft" for the past six months, lying on our club table with the notice of this competition, and the blank for the same, unfilled and unused. And, so far as I could learn, the copies of many others of our members, who, like myself, individually subscribe for it, were in the same condition In fact, of all the many thousand of "Camera Craft" readers only two hundred and fourteen, Mr. Clute writes me, took the trouble to read, fill up the coupon and expend a two-cent stamp to compete. If they had they would have had just as much chance to win the sixty dollar prize as I had. So stop talking about luck, and bad luck, until you are quite certain

you have taken advantage of the opportunities that are continually offering. Though I must confess after winning my share of them, there are not many so easy as was this one, nor so unexpected.

On receiving notice that I was the winner of the prize, I selected a "Number Naught Graphic," and the Eastman Kodak Company sent it to me promptly. It makes good to even a greater degree than I had anticipated. In Germany last summer I had found the tide setting more strongly than ever, toward very short focus lenses; and, as I had learned long ago, these older civilizations can teach us many things that we, in our pride of successful youth, may profit by if we are not too stubborn, photography by no means excepted.

I bought a Vest Pocket Camera, about the size of a box of Swedish safety matches, but with a fine lens of f-6.8 aperture and three-inch focus; and it has not been off my person since. If it had a faster shutter, a shutter that would do full justice to its lens, I should not have wished for anything better. One always sees the most artistic landscapes, cloud effects, and the most uncommon street scenes, when one's outfit is at home, and it is a great advantage to have this little affair always at hand, ready, even if it is without the focal plane and other attachments which make the "Number Naught" a ne plus ultra in everything but ability to go into a vest pocket. One cannot have everything, we must compromise somewhere. I will not at this time attempt to go into the reasons that account for the fact that the three-inch lenses in both these cameras have so much greater depth of field than the six to ten-inch lenses we usually carry in our hand cameras, nor for their apparent enormously increased speed. My good friend C. H. Claudy has done that admirably in his recent booklet, "Number Naught," which I strongly advise all hand camera users to read carefully. I feel that I must speak of one point that I think he does not emphasize sufficiently, though it seems to me the strongest argument in favor of the miniature camera. That is, that a fine, three-inch lens, set rigidly in the proper place (and that means the hyper-focal distance) will invariably produce an absolutely sharp negative, all over, in all planes from infinity to even five or six feet, if not moved while the shutter is operating; and then, when one has a really sharp negative, there is practically no limit to the amount of enlargement it will stand. I do not know how the tiny scraps I am sending with this will reproduce in the half-tone cuts, but Mr. Clute will, I am sure, bear me out in the claim that they are all microscopically sharp, and the enlargements, though very hurriedly made, are almost as sharp. Carefully focused, in enlarging, they

FOURTH OF JULY SNAP-SHOTS.
Made with a "Number Naught Graphic."
By PERCY M. REEVES.

READY TO MARCH.

would be quite as sharp as the originals. Notice the one showing the group of little girls with flags, taken of our recent safe and sane Fourth of July celebration. The faces of the little girls, only four or five feet from the camera, are good outdoor portraits, their parents say, while just over their heads, and sharper still, though more than a half mile away, is the Colonial mansion of Charles Carroll of Carrollton. With my finest lens, a six-inch, Carl Zeiss Protar, stopped down to f-64, carefully focused with magnifier on ground glass, and using a tripod, I might perhaps hope to get those two planes somewhere near sharp together; but that stop would

THE PARK WALK.

necessitate an exposure of about a second, and a fiftieth of a second would be too long for these restless children. The Graflex with f-4.5 Tessar would stop the kids, or some of them, all right; but the background would be chaos, as usual; the Multi-Speed perhaps a little better. The pictures herewith, were all made with the "Number Naught," focal plane shutter speed of 1-110th second, with its Kodak Anastigmat wide open, or at f-6.3; and, after a pretty wide experience, I have yet to see or hear of any other outfit that could do it. The other large picture, the park walk under heavy shade trees, and the somersault in the air by the skater Rollo, were both taken at just about sundown; the former at 1-30th and the latter at 1-365th second. While both are underexposed, I think both are, backgrounds considered, beyond the reach of any other camera that has yet been put on the market.

"Long-Distance" Stereograms

By W. C. Marley

This title we give to landscape views, taken in two exposures, from standpoints so far separated as to give stereoscopic relief in distant objects, when the two resulting prints are trimmed and mounted properly. To be perfect stereograms, they should be taken simultaneously, of course, by two operators, using two cameras, whose lenses are of identical focus. If, however, certain conditions or rules be followed, one man, with but a single camera, can get wonderful results.

In the first place, the standpoint must be a well-elevated one, to eliminate as much foreground as possible. The ideal place would be a cliff-crowned hill or mountain top. The two standpoints must be at the same

A MOUNTAIN FARM: ULSTER COUNTY, NEW YORK.
Two separate exposures taken 125 feet apart

level, and in the same plane, i. e., equally distant from the view-objects. They should be selected and marked before the first exposure is made, as no time is to be wasted between the exposures, or the lighting effects will change

The day should be a bright one, and cloudless, if possible, for the position of the clouds, and especially their shadows on the landscape, will change perceptibly between the two exposures, and might injure the finished effect.

No moving teams or trains, smoking chimneys, or brush fires should be included, for changes of position in these are bound to happen while the camera is being moved to the second standpoint. Some distant building, hill, tree clump, or the like, must be selected as the center, on which each exposure is to be focused.

Now as to the proper distance apart for the two standpoints. In ordinary vision, we get good relief in all objects up to twenty feet away from our eyes, which may be said to average three inches in separation. Our proportion, then, is as three inches to two hundred and forty (twenty feet), or, say, one to eighty. Hence, if we separate our standpoints about one-eightieth of the estimated distance to the middle-ground objects, we shall obtain good relief throughout most of our scene. There is considerable latitude in this; and, by increasing the separation, the stereo-relief can be made to extend further into the distance. Of course, this makes necessary the trimming off, at the bases, of more foreground objects, on account of distortion.

The trimming, indeed, is most important. Every object so placed as to strain the eye through nearness to camera must be trimmed off, even though it appear in both elements; and, of course, everything not in both elements

A MOUNTAIN VILLAGE: CRAGSMOOR, NEW YORK.

must surely be eliminated. The two prints must be narrower than in normal stereograms, for objects on the sky line are further apart than usual.

We want detail three, four, and five miles away; hence the use of a long-focus lens is best, aided by a ray filter, to cut out haze and render blue distances better; say, a four or six time screen. No special plate is necessary; the filter helps them all. I find old-fashioned print-out paper to be the best for this work, as I can bring both prints up to same shade easily in the frequent case of unequal density in the two negatives. It also renders distant detail better than developing papers.

Residents of flat country cannot attempt this specialty at home, but they might bear it in mind during trips to mountain regions. One successful slide is worth a dozen ordinary stereos.

Victor Selb, of Brussels, has done some wonderful work in the Alps, following this method, which he practically originated; though Sanford Robinson, of Los Angeles, secured similar results about the same time, working independently. Others in Europe and here have experimented on the same lines, so that it is perhaps impossible to say who was the first to make "long-distance" stereos or "modelgrams."

"Art is nature carried to a higher power by reason of its passage through a human consciousness. Thought and emotion tend to crystallize into forms of beauty as inevitably, and according to the same laws, as does the frost on the window pane. Art, in one of its aspects, is the weaving of a pattern, the communication of an order and a method to lines, colors, sounds."—Claude Bragdon in "The American Architect."

LOOKING ACROSS SANDBURG VALLEY TOWARDS THE CATSKILLS.
Two separate exposures taken 100 feet apart.

Success—Or Otherwise

Many writers are given full scope, in the pages of our journals at the present day, to explain to us why John Smith or Peter Jones does or does not make a success of the photographic business. But, if we follow them closely, we may, perchance, find that Smith or Jones is far more businesslike than the chap who writes of him. Many things have to do with success; count along the line and see how many or how few have stood the test for the past twenty years. It is not always the one that can reel off (perhaps from a book before him) terms and signs algebraic, who can make the most satisfactory photograph of that "blessed baby," or the new "brother-in-law and wife." Often, very often, we find the best and most entertaining writer the most indifferent sort, when it comes to "Success—or Otherwise." On the other hand, we find quite often that the best worker and the most successful photographer is the man who never puts pen to paper for the enlightenment of his fellow craftsmen. This should not be, by any manner of means. And then again, the best photographers are sometimes found where least expected. Taking all these things into consideration, it is somewhat difficult to determine who is best entitled to rank as a success, and who otherwise.

And yet, after a careful "looking backward" to 1860 or thereabouts, it is plainly seen that the man who makes a success is one who is most hard working and painstaking, one who works early and late, one who can and does do everything well and expeditiously. He is one who has early learned the importance of detail and economy, nothing, however small, escapes his careful scrutiny. Especially does he believe in the power of a good first impression upon the prospective patron; the reception room is neat, the attendant at the desk is always in evidence and always well trained. Everything is of the new and up-to-date pattern, that the attendant offers to the patron. This assures each and every customer becoming a standing advertisement for that gallery. It is utterly impossible for any detail, however small, to be overlooked or forgotten, if you desire to make a success of your undertakings. Those of us who can call over the names of the few who have made a success, even the few here in our Golden State, during the last twenty years, know full well that the above is true. It is impossible to drift along. It is a stern requisite that strenuous effort must be made in order to keep moving in the right direction, else the current will flow on and leave the one with a strong tendency to land high and dry on some shoal or sand bar, quite unable to again get afloat and into the swim. For success or otherwise,—as appears to "OLD FORTY."

"Perfect taste is the faculty of receiving the greatest possible pleasure from these material sources which are attractive to our moral nature in its purity and perfection. He who receives no pleasure from these sources, wants taste; he who receives pleasure from any other sources, has false or bad taste."—Roskin.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1910. No. 9

The Milwaukee Convention

The Milwaukee Convention was a success. The attendance, the number and quality of the exhibits, the displays of the manufacturers and dealers, the papers read and lectures delivered, the demonstrations made, all surprised the most sanguine by their quantity and quality. Even the officers of the year who had the work in hand were surprised at the results of their efforts; efforts so well directed and so well sustained that only success could possibly have resulted. With so many of the other magazines devoting space to the full report, we feel that we can best serve the major portion of our readers by giving them our regular form of contents. A copy of the "Bulletin of Photography" for July twenty-seventh, price five cents, will be found to contain a full and complete report. "Abel's Photographic Weekly" also contains the report, running through two numbers, those for July sixteenth and twenty-third. The next meeting will be held at St. Paul, Minnesota. The officers elected for the coming year are as follows: President, G. W. Harris, Washington, District of Columbia; First Vice President, Ben Larrimer, Marion, Indiana; Second Vice President, Charles F. Townsend, Des Moines, Iowa; Treasurer, L. A. Dozer, Bucyrus, Ohio, and Secretary, Manly W. Tyree, Raleigh, North Carolina. The Women's Federation took an important part, both in the matter of attendance and pictures displayed. The establishment of a Progress Medal was a move that should result in much good to the Association. The one hundred dollar prize for the best novelty shown was awarded to Commodore Steffens of Chicago for his artificial light arrangement for portrait work. The convention closed by presenting a diamond ring to ex-Secretary Evanoff.

The Pacific Northwest Convention

Reports from Vancouver advise us that the tenth annual Convention of the Photographers' Association of the Pacific Northwest, closing August 5th, was the best attended and most successfully handled Convention that that wide-awake body of photographers has ever held. By the time the usual pictures reached us it was too late to have blocks made in time for this issue, and we are, therefore, holding over the report until our next issue. So doing will permit us to give both the report and a number of the best pictures, as heretofore, in the same number. Our friends, the members, will, we trust, approve of our action, despite the delay in giving them a report. We cannot, however, refrain from mentioning the praise that is

due the Canadian members for their justification of Vancouver's selection as the meeting place this year. They have set a standard that will be hard for future Convention locations to equal in the way of hospitality and thorough arrangement of detail.

Dr. Eisen Again Going Abroad

Dr. Gustav Eisen, one of the best known pictorial photographers on the Pacific Coast, has left recently for an extended tour abroad. He will be gone for two years, possibly longer, and during that time will travel continually, making a tour even more comprehensive than any he has heretofore undertaken. His wide experience as a traveler, his intimate knowledge of all languages, together with his reputation abroad as an authoritative writer on special scientific subjects, assures him a measure of profit from such a trip that is not given the average man who embarks upon such a tour. His camera, as heretofore, will be his constant companion, although he promises himself that he will, for this time, be less easily tempted to avail himself of its power. We but voice the sentiments of his host of friends when we wish the doctor an enjoyable absence and a safe return.

Mr. and Mrs. Cramer On The Coast

F. Ernest Cramer and wife were in San Francisco for a short stay during the early part of August. Mr. Cramer has been here on several previous occasions and expresses himself as surprised at the wonderful recovery of the city since the fire. Mrs. Cramer, a former resident of San Francisco, is, of course, pleased to be again with her host of friends in this city. Their stay, although made as long as Mr. Cramer's absence was allowable, was a busy one; not permitting them to satisfy more than a fractional part of the demands made upon their time by their large circle of friends. Their short stay here was followed by a trip through the southern part of the State before their return to St. Louis.

The Old Pro's Lament

By Frank Davey, with Apologies to Longfellow

Under the sombre velvet cloth the "photo artist" stands;
A man endowed with patience, he, though acid-stained his hands.
His brow with perspiration beads; he strives with spirits sore,
To pacify some screaming brat, its image to secure.

Week in, week out, from morn till night, he toils to pay his way,
But fails to gain a surplus to meet the "rainy day."
He dreams of palmy days long past, of "easy money" made
Before the days of dry plates came and spoiled the photo trade.

Toiling, hard up, and borrowing, onward through life he goes,
Striving each day to find some work to pay the debts he owes.
He has his secret formulas, none others need he know,
Except that most elusive one, just how to make the dough.

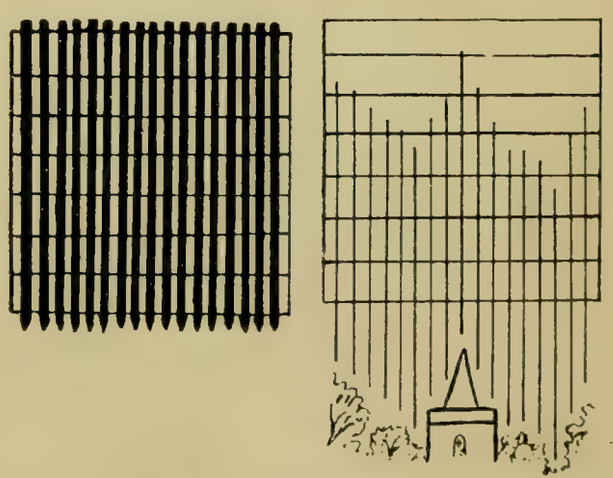
A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

THE GRADED COLOR SCREEN.

This department has dealt, in the last two numbers, with the value of a graded color screen to hold back the sky and establish a proper relation between it and the landscape. I have personally experimented with a home-made screen, using therefor a fixed-out lantern plate carefully stained and then graded by washing out with successive dippings in water. Using this in front of the lens I found it very difficult to obtain any actual gradation in the negative—it tended to be all restrained or all free. I obtained much better results by making the line of demarcation between the stain and the clear glass sharp. It was then possible to slide the screen over the negative and note where the restraining action was effective. Mr. Bolas, the well-known writer on photographic optics, has been contributing a series of papers to the "Amateur Photographer" on the question. He first showed how, with lenses that cover a much larger field than is actually used, it is possible, by means of the rising front, to shift the sky region of the picture into the periphery of the lens whilst the foreground occupied the region of the optical center, in this way causing the latter to receive from four to six times as much light as the sky. It is doubtful whether any graded screen can do more than this. Another method to which he draws attention is differential sensitising of the plate. This is quite possible, but it would require the photographer to always place his horizon line at the point of differentiation, which would often be impossible. In his last paper Mr Bolas considers the use of the sky shade. In this connection he says:

"Perhaps the most satisfactory of all the various devices that have been proposed is one which was in use some forty years ago, but which has fallen out of use, probably owing to its somewhat inconvenient size, when size is measured by the present standard of portability. There is, however, no reason why the device in question should not be made very much more portable than formerly. The first figure represents the device as a screen supported in front of the lens, and with adjustments for distance and height; also, it should hinge back. The screen consists of small bars of wood, something like match stems, each of these sliding independently of the others. These bars can be drawn down or adjusted, as shown by the second so as in a sense to fit the sky line, and the degree of vignetting will be determined by the distance of the screen



in front of the lens, also by the extent to which the screen covers the lens.

"In the first the individual bars are shown as not being quite close together, but there is no mechanical reason why there should not be an adjustment in this respect also; one obvious way being to make the bars oblong in section so that by turning the bars on a vertical axis any required degree of virtual width may be realized. In the old days it was usual to adjust the bars, and to give a part of the exposure with the screen in position and part with the screen hinged back out of the way. Probably a method more suited to modern practice would be to

adjust the virtual distance between the bars, by some such method as that suggested above. It is, perhaps, unnecessary to remark that under no ordinary conditions would there be any trace of the individual bars on the resulting photograph. As bearing on this, I may call to mind Mr. Dando's remark that in making snapshots of the animals in the Zoological Gardens it is seldom necessary to trouble about the smaller bars or meshes, as, with proper care, they do not show in the photographs."

N. B.—It occurs to me that a line of black pins, stuck through paper as they are sometimes sold, might be mounted on a cut-out lens cap and used in the manner described.—H. D.'A. P.

EXPOSURE WHEN ENLARGING OR COPYING.

To ascertain the exact exposure for an enlargement, we must nearly always make a trial, and, as a rule, time is saved if the first sheet of paper is devoted to a series of varied exposures from which we may estimate the exact time required. When, however, we have ascertained the right exposure for a given scale of enlargement, it often happens that we want to vary the scale so as to include either more or less of the subject on the particular size of paper that we are using. To ascertain the new time of exposure we must then either make a fresh trial, or resort to calculation, and as the proper rule for making the calculation is not likely to be remembered, the usual result is one more sheet of paper spoilt. For some years we have given in the "Almanac" a table of relative exposures for varying degrees of enlargement, as calculated by Mr. Debenham. In this table the exposures given are all proportioned to that required for copying on a scale of full size, the latter being taken as unity. As a rule, however, the exposure that we know is not that required for a unit magnification, but for some other scale of enlargement, and though in such a case the table will be of assistance, its use involves a little calculation. We may assume, for example, that we know that forty seconds is the correct exposure for an enlargement of five times, but we want to know the exposure for eight times. The "Almanac" table shows that the relative exposures are as nine to twenty and one-fourth, but a little calculation is required to show that this ratio makes the exposure one hundred seconds for an eight-times enlargement; we have therefore devised a new table in which this and all similar results can be seen at a glance.

To take the example just considered, we look out five in the top horizontal line, and then under it and on a line

EXPOSURE TABLE FOR ENLARGING (WITHOUT A CONDENSER).

New Times of Enlargement.	Times of enlargement for which exposure is known.											
	1	1½	2	2½	3	3½	4	5	6	8	10	12
1	1	⅔	2/5	⅓	¼	1/5	⅙	1/9	1/12	1/20	1/30	1/40
1½	1½	1	¾	½	2/5	⅓	¼	⅙	⅛	1/12	1/20	1/30
2	2¼	1½	1	¾	3/5	2/5	⅓	¼	1/5	1/9	1/12	1/20
2½	3	2	1¼	1	¼	3/5	½	⅓	¼	⅙	1/10	1/15
3	4	2½	1 4/5	1¼	1	¾	⅔	2/5	⅓	1/5	⅛	1/11
3½	5	3½	2¼	1¾	1¼	1	4/5	½	2/5	¼	⅙	1/9
4	6	4	3	2	1½	1¼	1	¾	½	⅓	1/5	1/7
5	9	6	4	3	2¼	1¾	1½	1	¾	2/5	⅓	1/5
6	12	8	5	4	3	2½	2	1¼	1	3/5	2/5	2/7
8	20	13	9	7	5	4	3½	2¼	1¾	1	⅔	½
10	30	19	13	10	7	6	5	3½	2½	1½	1	¾
12	42	27	19	14	11	8	7	4½	3½	2	1½	1

To use this table find in the top horizontal line the number of times of enlargement for which exposure is known. Under this number the relative time of exposure for different degrees of enlargement will be found opposite the new times of enlargement in first vertical column.

with eight in the first vertical column we find two and a quarter, which means that an eight-times enlargement requires just two and one-fourth times as much exposure as a five-times enlargement. Similarly, if changing from three to eight times, we must give five times the exposure, or if changing from five to three times we must reduce the exposure to two-fifths of that required for the bigger scale.

It may be seen that the figures in this table do not in all cases agree with those found in the old table, but this is due to the fact that in the new table we have allowed a slight latitude of exposure in order to eliminate or simplify awkward fractions. The maximum latitude we have taken as permissible is 10 per cent of the total, which is certainly not excessive, and in the great majority of cases the adjustment made is very much less than ten per cent.

The series of scales given covers those that are most generally useful, and it stops at twelve times, because anything beyond that is not likely to be required. A 3½x2½ negative enlarged twelve times gives a print 42x30, which is far bigger than any work usually done in an enlarging camera. Bigger work can only be carried out with an enlarging lantern, with which instrument no table of this kind is applicable unless we dispense with the condenser method of illumination.. The fractional scales given are selected as being often useful. Thus a quarter-plate enlarged one and one-half times gives what is practically a half-plate print. If enlarged two and one-half times it fills a 10x8 sheet of paper, while a 3½x2½ negative enlarged three and one-half times will fill a 12x10 sheet.

For copying on a reduced scale a second table is given, and this is used in precisely the same manner as the enlarging table. The figures are similarly adjusted to within ten per cent., which is a quite safe allowance, whether bromide paper or plates be used for copying purposes. It will be seen that in this table the numbers tend to run in series, so that, for example, an exposure that is correct for a reduction of one-tenth will serve for any degree of reduction from one-eighth down to one-twentieth. The biggest error here is only six per cent. The table exposure for one-twentieth is six per cent. too much, while that for one-eighth is three per cent. too little, but such errors as these are obviously quite negligible.

One other matter should be noted in connection with the enlarging table. It is assumed that a doublet lens of ordinary pattern, such as a rapid rectilinear or double anastigmat, is used. If a single lens is employed instead, or a lens of very unsymmetrical type, such as one on the Bis Telar principle, then this

EXPOSURE TABLE FOR COPYING OR REDUCING.

New Scales of Reduction	Scale of reduction for which exposure is known.											
	1	¾	⅔	½	⅓	¼	1/5	⅙	⅛	1/10	1/20	1/30
1	1	1¼	1½	1¾	2¼	2½	3	3	3	3½	3½	3½
¾	¾	1	1 1/10	1¼	1¾	2	2	2¼	2½	2½	3	3
⅔	¾	⅞	1	1¼	1½	1¾	2	2	2¼	2¼	2½	2½
½	3/5	¾	4/5	1	1¼	1½	1½	1¾	2	2	2	2
⅓	2/5	3/5	⅔	4/5	1	1⅙	1¼	1¼	1½	1½	1½	1¾
¼	2/5	½	3/5	¾	⅞	1	1	1⅛	1¼	1¼	1½	1½
1/5	2/5	½	½	⅔	4/5	1	1	1	1⅙	1⅛	1¼	1¼
⅙	⅓	2/5	½	⅔	¾	⅞	1	1	1	1⅛	1 1/5	1¼
⅛	⅓	2/5	2/5	3/5	¾	4/5	⅞	1	1	1	1 1/10	1⅛
1/10	⅓	2/5	2/5	½	⅔	¾	4/5	⅞	1	1	1	1 1/9
1/20	2/7	2/5	2/5	½	⅔	¾	4/5	⅞	1	1	1	1
1/30	¼	⅜	2/5	½	3/5	¾	¾	⅞	⅞	⅞	1	1

To use this table find in the top horizontal line the scale of reduction for which exposure is known. Under this scale the relative time of exposure for different degrees of reduction will be found opposite the new scales of reduction marked in first vertical column.

table will not give very accurate results when a very big variation of scale is made. This is due to the fact that such lenses are of variable aperture according to the distance of the object. In the case of reducing, this variation is not of much importance, provided the same end of the lens is always presented to the object.

In some rare cases we may want to know the exposure for, say, an enlargement when the only basis we have is an exposure for reduction. We can then use the tables together. Suppose, for example, we know the exposure for a reduction of one-half and want that for an enlargement of two diameters. The reduction table shows that for full-size copying the exposure known for one-half scale must be multiplied by one and three-fourths, the enlarging table that a two-times enlargement requires two and one-fourth times the exposure for full size. It follows, then, that the two-times enlargement will require the exposure for a reduction of one-half to be multiplied by one and three-fourths, and then by two and one-fourth, or by a single factor of $1\frac{3}{4}x2\frac{1}{4}=3\ 15\text{-}16$, or four as nearly as possible, and within an error of about two per cent.—"British Journal of Photography."

DEVELOPMENT OF PRINTING-OUT (SOLIO, ETC.) PAPERS.

This department has reported many formulae for this purpose. That these are not altogether satisfactory seems evident by the constancy with which new ones are offered. Recently the Bulletin of the French Photographic Society has published two papers. One by M. J. Desaline deals at length with the chemical side of the problem. He claims the best results for paramidophenol. He makes a stock solution:

Paramidophenol	5 parts
Tartaric acid	7 parts
Sodium acetate	11 parts
Acetic acid	45 parts
Water	1000 parts

This is diluted for use from five to twenty times and a separate portion used for each print.

M. G. Baligny turns to gallic acid. We have previously reported work with this developer, but his formula differs from those published. Writing in "British Journal of Photography," he advises:

"The writer is aware that with certain baths obtainable commercially prints are producible with tones closely resembling those obtained with gold, but my object was to secure on gelatino-chloride paper the rich, warm tones possessed by the old negatives on waxed paper. The results when shown at a recent meeting of the French Photographic Society proved so attractive to a number of people that it may be of service if the formulae by which they are obtained be set forth.

The prints are made of depth about one-quarter of that which is usually adopted in making print-out pictures, using the ordinary printing-out paper, or any paper containing free silver. Any number of prints may be made at a time, and the whole batch put aside for development. Two stock solutions are prepared:

A.—Gallic acid	2 ounces
Alcohol, 90 degrees	20 ounces
B.—Lead acetate	2 ounces
Water	20 ounces

To prepare the developing bath, take:

Gallic acid, solution A	80 minims
Lead, solution B	15 minims
Water	7 ounces

This formula is an excellent one for prints which have been slightly or half printed; that is to say, only half the depth which they would be made when toning in the usual way. The developing solution is placed in a dish which is kept for this purpose only, the print, which should not have been previously washed, is slipped in face up, so that it is uniformly covered with the solution. The bath acts slowly; at the end of a minute scarcely any change can be seen in the general tone. The effects produced are of sepia color, ranging from the clear, true sepia to a sepia brown, according to slight modifications made as below in the composition of the bath. With bath given above, and printing to a depth of one-half or one-quarter, sepia tones are obtained.

When treating prints more lightly printed, it is well to use a lesser proportion of gallic acid and develop for longer, thus avoiding the objectionable greenish hue in the tone. The following is a suitable formula:

Gallic acid, solution A.....35 minims
Lead acetate, solution B....2 to 5 drops
Water .....7 ounces

If prints somewhat blacker, less warm, in tone are preferred, the following is a good proportion:

Gallic acid, solution A.....80 minims
Lead acetate, solution B.....80 minims
Water ..... 7 ounces

The increased quantity of the lead acetate is responsible for the pleasing warm black tone given by this bath.

By adding also a little acetic acid to the bath and increasing the proportion of gallic acid the tones obtained approach those of albumen paper toned with gold. The formula is:

Gallic acid, solution A.....3 drams
Acetic acid (glacial).... .15 to 25 drops
Lead acetate, solution B..... 5 drops
Water .....7 ounces

This is a strong bath. If employed without lead, the tone obtained more closely resembles the red chalk obtained with prints exposed to a quarter or half depth. But if the paper is very lightly printed and a few drops of lead acetate solution added, the tone obtained is more like a deep sepia to black.

All the above formulae may be applied equally well to transparency plates coated with print-out emulsion.

In making use of the process it should be borne in mind that a very lightly printed picture developed in a bath which acts quickly will usually yield a very bad tone.

The best tones are obtained by allowing the exposure to be fairly full and developing in a weak bath. The bath first given in these notes may be taken as about the standard for a sepia tone.

After development the prints are simply washed to remove acetic acid, fixed in a bath of hypo containing some bisulphite, and finally washed in running water.

MEASURING THE FOCUS OF A NEGATIVE LENS.

There are many ways by which the focus of a positive lens can be measured, but few of them are of any use in measuring the focus of a negative lens. This, too, is a point on which the recognized photographic text books are almost completely silent. We therefore reprint here an account of a simple means of doing so, which we gave some two years ago, by which the focus of a negative lens may be measured almost as easily as a positive. If we hold such a lens in the path of a beam of sunlight, instead of bringing the rays to a focus, it causes them to diverge, as can be seen by holding a piece of white card where it will receive them. A circular disc of light will appear on the card, and when the latter is held at such a distance from the negative lens that the diameter of the disc is twice the diameter of the lens itself, the distance from the card to the lens is the focus of the lens. If the negative can be fitted in the camera, all that is necessary is to ascertain the diameter of the clear opening of the lens and to draw a circle on the ground-glass of twice that diameter. The camera is then turned towards the sun and racked in or out until the circle of light and that drawn on the glass coincide. The distance of the ground-glass from the lens is then measured. The same method can be adopted without a camera by fitting the negative lens over a hole in a sheet of card, and describing on another card a circle of twice the diameter of the whole.—"Photography."

PHOTOGRAPHY AND THE AURORA BOREALIS.

In a communication to the French Academy of Sciences Carl Stromer describes a remarkable series of photographs of the aurora borealis made by him at Bosekop, Norway, in February and March of this year. By the use of a cinematographic lens of twenty-five millimeters diameter and a focal distance of fifty millimeters, and Lumiere plates, he was able to make pictures with an exposure ranging from a fraction of a second to twenty seconds. Of eight hundred photographs taken about half were successful. Having solved the problem of making satisfactory pictures he applied the photographic method to the measurement of the aurora and the determination of its position in space. Simultaneous photographs were taken from two stations about four kilometers apart, connected by telephone. Comparing the position of the aurora among the stars on the two plates it was possible to calculate its altitude and distance with great precision.—"Scientific American."

Our Book Shelves

"THE PHOTOGRAPHIC ANNUAL, 1910-11."

The new volume of this popular annual, formerly known as "The Figures, Facts and Formulae of Photography," and still bearing that name as a subtitle, will be available when this reaches our readers. Considerable alteration has been made this year, the principal one being the addition of three extensive articles, "Screen Plate Color Photography," "Stereoscopic Work," and "Notes on Development," all by the editor, E. J. Wall, F. R. P. S. Much new matter has been added to the regular sections, and some weeding out of old matter no longer necessary has been accomplished. The book is one that fills its own particular field in a manner that makes it practically indispensable alike to the busy worker and the occasional dabbler. The paper cover edition sells for fifty cents, the cloth one, one dollar. The postage is eight and ten cents respectively. Supplied by Tennant & Ward, 122 East Twenty-fifth Street, New York. Most of the dealers will have a supply, including Hirsch & Kaiser of this city.

"WITH OTHER PHOTOGRAPHERS"

The above is the title of a book that should be in the hands of every portrait photographer in the land, every photographer that aims to make portraits, that has any intention of making portraits, or who would like to learn just how the masters of the craft go about the work. As a piece of printing it is simply perfect, the size, 9½x12, permitting of good placing of the illustrations, of which there is a wealth. Its author, Ryland W. Phillips, has the right idea. In this book he has collected some examples of the work of twenty-five of the masters, in nearly every case showing the interior of the studio, with the sitter in position and everything arranged, just at the time of making the exposure. In addition to the reproduction of the finished picture is another, sometimes more, showing what he is pleased to call the "raw" print. With each of these twenty-five series of pictures there is a description of the methods employed, and when necessary detailed information concerning the reproductions, these last being referred to by number. The book gives the reader information of priceless value; it gives him at once an intimate knowledge concerning the masters, their methods and their results. Better, it gives all this to him in such a form that he can refer to it again and again, finding new inspiration and added knowledge each time. The book will be on sale by the photographic trade generally before this reaches the eyes of our readers. The price is two dollars and fifty cents. It is published by the Eastman Kodak Company, Rochester, New York.

"ISOCHROMATIC PHOTOGRAPHY."

This is the title of a new booklet, about the most instructive one we have seen for a long time. There are twenty-four pages crowded with just the kind of information the worker should have concerning the why and wherefore of color screens, or ray filters, their need and their specific effect in use. A good portion of the book is given over to "Questions and Answers," the questions being compiled from the most frequently recurring ones that have reached Professor Wallace in the regular correspondence connected with his work of assisting those desirous of securing information on the subject. This part of the book seems to answer every possible question that could be asked on the subject. In addition, numerous examples of work made with and without filters are shown and there is a clear exposition of the importance of isochromatic landscape photography. The booklet is sent free upon request by the G. Cramer Dry Plate Company, St. Louis, Mo.

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

REMOVING SURFACE FOG.

A Mississippi correspondent has a number of negatives showing, after being two or three years old, a bluish and reddish looking stain or fog on their surfaces, particularly near the edges. This is what is called dichroic fog. Take an ounce or two of clear, fresh hypo bath and put in a crystal of red prussiate of potash and allow it to dissolve, coloring the hypo solution a decided straw color, almost a strong yellow. With a tuft of cotton rolled into a small ball, rub this on the film side of the negative, going rapidly over the surface. It is a strong reducer and should be applied in such a way as not to allow it to act upon the image or sink into the film. All that is wanted is surface action. Running water should be at hand to at once flood the plate as soon as the surface has been gone over quickly. It is best to flood the plate and then apply the solution again should the first quick application fail to remove all the stain. The negative should be soaked in cold water for from half to a full hour in order to soften the film and minimize danger of streaks or irregular action. The swabbing should also be quick and thorough for the same reason. A good washing must complete the operation in order to remove the hypo.

GRAMME WEIGHTS.

I was in a photographer's place the other day when he had occasion to use some gramme weight, but found none at hand. In fact, he had none of the metric system weights available. So he went about it in this way. He hunted up a thin piece of brass that had originally been used to back up some kind of a fancy advertising sign. With his trimmer he cut a long, narrow strip from this and then cut this strip down, little by little, until it weighed between three hundred and eight and three hundred and nine grains. Then his strip of sheet brass weighed just twenty grammes. Cutting this in two gave him two ten-gramme strips; cutting one of these in two gave him a ten, a five, and by dividing the remaining quarter properly, two two and a one-gramme weight was made. With this supply it was easy for him to weigh out any desired number of grammes from one to twenty. Of course, using the same plan one could secure grains. One might take a piece of sheet lead, let us say, cut it to a parallelogram weighing an ounce, and then by simple measurement cut it so that any given part or piece would weigh a determined number of grains.

A DIRECT ENLARGER.

An Illinois correspondent wants to know if it is not possible for him to decrease labor and expense by discarding his 5x7 camera in favor of a 4x5, using the same lens and thereby getting better perspective in his negatives, and fixing up a direct enlarging apparatus for making 8x10 prints from the smaller negatives without too much trouble. The lens on his 5x7 camera is eight inches focus. It is certain that he will get better perspective by using the eight-inch lens on the smaller plate. He will have a much lighter load to carry and there will be less inclination to leave the smaller camera at home. Plates will cost less, and the inevitable trial print, as well as those made regularly, will demand less paper. It will be a simple matter to rig up an enlarging apparatus using the same lens. All that is necessary is to make a tapering box about three feet long, with an arrangement at one end to hold the negative, and at the other some method of holding an 8x10 plate holder. The lens goes about one-third of the distance from the negative to the holder for the bromide paper, and should be so arranged that the shutter can be operated from the outside when it is desired to make the exposure on

the bromide paper. To be exact, the rule for finding the position of the negative, lens and paper is as follows: Multiply the focal length of the lens by the times of linear enlargement and to it add the focal length of the lens; the result being the requisite distance between paper and lens. This distance, divided by the times of enlargement, gives the distance between lens and negative. Of course it is best not to trust these figures entirely, taking the trouble to secure a sharp focus on a temporary ground glass screen in the plane of the paper before fastening the partition carrying the lens permanently in place. With such a piece of apparatus one can produce bromide enlargements of the predetermined size for which the enlarging box is calculated at a quite rapid rate. If one can carry the enlarger into the dark room each time it is not necessary to employ any holder for the paper. One we saw used recently had an ordinary printing frame fastened permanently in place at the larger end of the enlarger. This was fitted with a sheet of clear glass on which the paper was laid and the back put on. To prevent the light from getting at the paper through the back of the frame when the enlarger was carried out into the light, its user had a rough, cloth-lined box that he slipped over that end of the enlarger, much as one would put on a large square cap. The enlarger was carried from the dark room to the other end of the hall, where the exposures were made, by a handle fastened to one side. It was set upright in a good diffused light, the shutter opened for the determined time by means of the bulb which came through the side of the box and then carried back into the dark room where the paper was changed for another exposure. The making of the enlargements became, when working in this manner, almost as easy as making contact prints, the exposures of course being somewhat longer and the enlarger being a little more inconvenient to carry about.

THE RAY FILTER.

A correspondent wants to experiment with a home-made filter and asks as to the dye to be used. Supposing that he simply wishes to make an orange yellow one, one that will cut down the too strong action of the ultra-violet and blue-violet rays, all that is necessary is to take fifteen grains of napthol yellow, dissolve it in eight ounces of water, and in it soak a lantern slide cover glasses that have been given a coating of plain gelatine. A fixed out lantern slide plate is just the thing. The depth of color depends upon the time of immersion. He might try varying times, say one, two and three minutes. Give them a slight rinse before drying. A more expensive dye, but one that will give, in the filter, the same amount of correction with a much shorter exposure, is filter yellow K. It is to be used in the same way.

TEN PER CENT SOLUTIONS.

Another correspondent tries to draw us into a discussion as to just how to prepare a ten per cent solution. He wants to know whether he should put one ounce of the chemical into ten ounces of water, one ounce of the chemical into nine ounces, or put in the ounce of chemical and fill up to ten ounces with water. The truth of the matter is that none of these methods will give exactly a ten per cent solution. If he must have it exact we would advise the following: Put the bottle or container on one side of a scale and balance it with something—shot, nails or anything handy. Then put on the desired weight of the chemical, say, one ounce. Put enough of the chemical in the bottle to again balance. Then put nine more such weights on the pan and balance again by pouring in water. To be exact, a ten per cent solution is one that is made by dissolving forty-four and eight-tenths grains in water to make an ounce. While on the subject it might be well to give a very handy rule for converting percentages into grains per ounce. It is: Multiply the percentage figure by four and add to the result its tenth part. Applying the rule to the ten per cent solution as above, we multiply ten by four, obtaining forty, and to this add one-fourth, or four, making forty-four. Forty-four grains of a chemical made up to one ounce by adding water will give a ten per cent solution within two tenths of a grain.

International Photographic Association

A GOOD EXCHANGE LIST.

Experience has shown that our Association has lost many good, careful workers, simply because they became discouraged at receiving several batches of poor prints, either in return for their good ones or sent unsolicited with a request for exchange. We must acknowledge that there are a large number of beginners and poor workers in our ranks; but, these same ranks contain more good workers than any one member could care to exchange with. And the trouble is not all for the good worker. Many an isolated beginner joins our association in the hope of receiving help and assistance from others like himself. His first few attempts at exchanging result in rebuffs, and he ceases to inflict his work upon others. This may all be avoided very easily by following a plan which I will outline below.

First, select the names of ten members from the published list, send them an initial exchange, and be sure you send out good prints, not prints that are interesting only to residents of your locality or interesting to yourself through some personal association, but prints that a total stranger may appreciate. It is not likely that you will get prompt reply from all of them; let us suppose that you only hear from five, and, out of these five, two send you as good prints as you sent. (The writer received nine out of twelve that were A1 prints when he first entered the exchange.) In sending the second print to these two accepted exchanges, ask them to kindly send you a list of those of their exchanges from whom they receive acceptable work. Let us suppose that these two inquiries result in six new and acceptable exchanges, although you may get eight or ten. On your second exchange with each of these six make the same request for a list of names; and, with the new names do the same. It will not be long before you either reach the end of the chain and find the names sent you are mainly duplicates of those you have already received, or you have a larger list than you can take care of properly. You will find that on the third or fourth link of the chain you begin to get the same names over and over, and if you will use your pencil a moment you will find that, assuming only three names to a list, you will have eighty exchanges. Very few would care to keep up a correspondence with eighty other members, to say nothing of the time required to make the prints.

And going a little further, we find that the adoption of this plan will take care of the newer members constantly joining and taking the places of those who drop out through lack of time to continue exchanging. If the new worker will but follow this plan and if you have been sending out good work, and sending it promptly, your name cannot help but go to him in the first, second or third link of the chain which he starts. This will save you from any necessity of trying to locate the good workers as they come in. They will find you out very shortly. If you are not a good worker, a beginner looking for help and counsel, the same plan will work in your case. You have simply to ask your various links who they can recommend as willing to exchange with a beginner and display an inclination to help with such criticism and hints as may be helpful. There are many quite good workers in our Association who are very kind in this respect when they find a beginner who is appreciative and does not try to get a collection of good prints in exchange for his own poor efforts.

If this plan I have outlined should become common it is quite evident that a member who was lax in discharging his obligations or who made a practice of sending out indifferent work, or both,

would soon find it difficult to do any exchanging. Few or none would care to recommend him and he would be left to do the best he could with other unreliable members like himself. It is but natural that the good worker in our Association, as soon as his work becomes known, has more demands made upon him for exchange than he can fill. He has no need of writing to strangers requesting exchange. This leaves the most of such initial requests to originate with the unreliable members or those failing to make exchange of equal value. A new member does not realize this fact and when he receives several batches of poor prints and few or no good ones, with a request for exchange, he naturally supposes that the Association is made up of very poor workers. That is a mistake. The Association contains hundreds of good workers, but they get an exchange list of their own very soon after joining and have no reason to send prints to the new members of whom they know nothing.

And above all else, do not forget your moral obligation to answer all requests for exchange. If the prints sent you are not satisfactory, either return them or send an equal number of good prints and decline further exchange. It is advisable to do the first, as the sending of good prints in exchange for those that are clearly of no value is often an encouragement to an unscrupulous member to try and impose upon others equally lenient in the matter. If your list of exchanges becomes too large, reduce it by dropping a few with an explanation as to the reason for so doing. But above all, see to it that you do not owe a single member a print.

It is needless to add that the above plan will work equally as well in the stereo, postcard, or lantern slide divisions of our Association.

R. A. Underwood,
I. P. A. 2103.

REPORT OF CHIEF ALBUM DIRECTOR, J. H. WINCHELL, PAINESVILLE, OHIO.

PENNSYLVANIA: William C Barbour, Sayre, Pennsylvania, who was appointed Director of this State, has moved away. J. H. Winchell, R. F. D. No. 2, Painesville, Ohio, Chief Album Director, will assume charge until a suitable Director is obtained to take charge. Mr. Winchell has completed Pennsylvania Album No. 1, containing twenty-six prints, contributed by eighteen members, and sent it out over a route list of eleven names. All Pennsylvania members who wish to be represented in these albums are requested to send prints to Mr. Winchell at once.

OHIO: Ohio Album No 12 has completed its route list and has been sent to Alaska. Colorado Album No 4 is now being circulated in this State. Ohio Album No. 13 is about ready to start out.

New members are requested to send prints to the Director if they wish to be represented in these albums.

MISSOURI: This State has sent in its Album No. 2. Ohio No. 6 is now being circulated. No. 3 Album will soon be ready to send out. J. Fred Peters, 6220 Berthold Avenue, St. Louis, has been appointed State Secretary.

CANADA: They have sent in Album No. 1, have No. 2 about ready to start out, have circulated Special No. 3 and will soon get another outside album.

INDIANA: They have sent in Indiana No. 1 and are at work on No. 2. While No. 2 is being compiled, Missouri Album No. 1 will be circulated.

R. A. Underwood, 813 West Thirty-first Street, Indianapolis, is assisting Mr. Bishop in getting out the albums.

KENTUCKY: G Harrison Truman handed in his resignation as Director, not having the time to attend to the albums. We would be pleased to hear from any of the members who have a little leisure time to take up the work in that State. Mr. Truman has got out four fine albums, which are being circulated in Colorado at the present time. We are sorry to lose Mr. Truman but we hope some one will volunteer to take his place.

ALASKA: P. S. Hunt, Valdez, Director, reports that he has compiled a new Alaska Album with twenty-four prints, the work of nine members. This is fine work for a division with so few members; other divisions with a large membership should take pattern.

TEXAS: Has gotten out three albums Alaska Album No. 1 is now being circulated. No. 4 is about ready for the members.

Director would like a report from the following States: New York, New Jersey, Massachusetts, Connecticut, Michigan, Wisconsin, Minnesota, North Dakota, South Dakota, Nebraska, Maryland and Kansas. Any Director wishing an outside album to circulate while getting up one for his State should write to the Chief Album Director asking for one.

NEW MEMBERS.

2541—W. St. George Elliott, 575 Fifth Ave., New York, N. Y.
4x5 and 5x7, developing paper, of general outdoor view work; for same and Jamaica W. I. views. Class 1.

2542—Walter Church, Box 81, Independence, Colo.
3¼x5½, developing paper, of mines in Cripple Creek, and Pike Peak views; for animals such as horses and farm pictures also mountain views. Post cards only. Class 1.

2543—Harry P. Ege, 1203 Jackson St., Joliet, Ill.
Class 2.

2544—Edward Smith, 531 Columbia St., Newport, Ky.
Class 2.

2545—H. E. Evans, Ayer, Mass.
2¼x3¼, 4x5 and 5x7, developing paper, of general views for the same. Class 1.

2546—William R. Lippold, 2620 Parker St., Omaha, Neb.
Class 2.

2547—H. Arthur Simmons, 3223 Leavenworth St., Omaha, Neb.
Class 2.

2548—J. E. Sundberg, Box B, Anamosa, Iowa.
5x7 and cabinet, developing papers, of photos, postal card work, and some view work; for the same. Class 1.

2549—Earl H. Resseguie, R. F. D. No. 2, Box 5, Custer, Mich.
5x7 and 4x5, developing papers, of rural views and water scenes; for post cards of anything of interest. Class 1.

2550—J. P. Kennah, Coulterville, Cal.
3¼x5½, developing papers, of groups, scenery and historical buildings and places; for anything of interest. Class 1.

2551—Edward Lawson, Kane, Pa.
Post card and 3¼x5½, developing paper, of street scenes and rural views; for water and farm views. Post cards only. Class 1.

2552—Ira E. Briggs, 536 West Seventh St., Erie, Pa.
Class 2.

2553—H. L. West, 209 West Fourth St., Erie, Pa.
Class 2.

2554—J. M. Sherwin, Box 714, Erie, Pa.
Class 2.

2555—Sam Samuel, Erie, Pa.
Up to 5x7, various papers, of general views; for the same. Class 1.

2556—John E. Thwaites, S. S. Dora, Valdez, Alaska.
Class 2.

2557—G. E. Crane, R. F. D. No. 2, Box 88, Mount Vernon, Wash.
3¼x5½, developing paper, of landscapes, seascapes, historical views, and the like; for post cards and 3¼x5½ prints of landscapes, seascapes, and anything of general interest. Class 1.

2558—C. T. Bullard, 150 Hollis St., South Farmingham, Mass.
Class 3.

2559—R. H. McKay, Higgins Block, Missoula, Mont.
3¼x5½ to 8x10, developing paper, of Indian views, mountains and hunting scenes; for the same. Post cards only. Class 1.

2560—Eugene Remmert, R. F. D. No. 4, Box 112, Lone Wolf, Okla.
3¼x5½, developing paper, of landscapes, mountain scenes, street scenes, public buildings, and outdoor portrait groups; for anything amusing and instructive in post card size from portraits to scenery of any kind. Class 1.

2561—Stuart P. Walsh, Box 107, Lockport, Ill.
4x5, developing paper, of landscapes, local points of interest, Lake Michigan, shipping, etc.; for landscapes, marine and naval subjects. Desire mostly post cards. Class 1.

2562—Z. T. Rawlston, R. F. D. No. 1, Hixson, Tenn.
Post cards and up to 5x7, developing papers, of views, water scenes and landscapes; for a limited number of prints and post cards. Class 1.

2563X—Nathaniel Mortonson, 806 High St., Marquette, Mich.
Class 2.

2564X—M. H. Hagewah, Presidio of San Francisco, Cal.
Post cards and 6½x8½, developing papers, of views, landscapes, marine and military views; for the same in post cards only. Class 1.

2565X—E. V. Bargamin, Elk City, Ida.
Post cards. Class 1.

RENEWALS.

1672—A. H. Fenn, 15 Colony St., Meriden, Conn.
Stereoscopic views, printing-out paper, of country scenery. Class 1 for sample exchange of stereos only.

1896X—Roy J. Sawyer, 1564 Greenup St., Covington, Ky.
Post cards only, of landscapes, flowers, etc.; for the same in post cards only. Class 1.

1967—A. I. Root, 3006 Pacific St., Omaha, Neb.
Class 2.

2065—Clifton Cohee, Frankfort, Ind.
Class 2.

2112—R. Prosser, Sizerville, Pa.
Class 2.

2127X—Chas. T. Sansberry, Anderson, Ind.
Class 2.

2140X—Cleo L. Bowerize, 58 Cottage St., Ashland, Ohio.
3¼x4¼ to 5x7, and enlargements to 8x10, of local views, portraits, landscapes, water and animal views; for mostly historic landscape, marine, animal, local, town views, and personal portraits. Post cards or prints. Class 1.

2381—Royal M. La Flower, Port Angeles, Wash.
Reports that he is working in the country at present, and members exchanging with him will be answered within three weeks.

2459—W. H. Schmidt, Turlock, Cal.
Is changing from Class 1 to Class 2 for the next few months. Will probably return to Class 1 in the spring.

2509—D. C. Davison, Texas City, Tex.
Post cards only of general views; for the same. Class 1.

2513—John Beck, 224 W. Park Ave., Aurora, Ill.
3¼x5½, post card size, developing paper, of general subjects; for the same. Class 1.

2533X—Gilmer Winston, Union & Planters Bank, Memphis, Tenn.
In addition to the exchanges mentioned in the last issue, he will exchange post cards. Class 1.

WITHDRAWALS.

2282X—Jeppe C. Jepson, Point Terrace, Ore.
On account of lack of time.

Club News and Notes

Club Secretaries and others will oblige by giving us reports for this Department.

NEW PRESIDENT FOR GREATER MONTREAL CAMERA CLUB.

In the election of A. H. Ward as Honorary President of this Club, we are to be congratulated. Mr. Ward's personality, enthusiasm and love of photography, with his knowledge of photographic supplies, gained through years of service in the manufacturing department of Wellington & Ward, Eldree, England, particularly fits him for this position. Although thoroughly understanding the manufacturing of supplies, Mr Ward is purely an amateur photographer, is one who loves the "hobby," ever ready to spend his time in demonstrating and helping the beginner as well as the advanced worker. His enthusiasm and activity will be a stimulant to the club members; even the "Drone" will be pretty sure to become infected and turn into an effective, happy worker.

While mentioning the "Drone," it occurs to me that some of the secretaries of older clubs might be able to give in these columns their experience and some few hints on "How to Convert or Cure a Drone." I believe quality, not quantity, in numbers, is what means success to the clubs. We all like to meet the real workers.

Success to the clubs.

H. E. Allen, Secretary.

THE SEVENTH AMERICAN PHOTOGRAPHIC SALON TO BE PURELY AMERICAN.

The following extract, taken from the prospectus of the Seventh American Salon, will convey some idea to our workers, of the importance, in the Art world, of that event.

Our art museums are hanging the American Salon under the same conditions as any other important art collection and with the assurance of the Eighth Salon to hang in the Metropolitan Museum, gives pictorial photography a standing and recognition as an art medium.

"The Seventh Salon will be devoted entirely to the work of Americans, making it an American Salon in fact as well as in name. The exhibit will be limited to two hundred prints and the standard will be higher than ever before. There are enough good workers in this country to make the salon one of the great art events of the coming season. We want your help and interest to assist in making it so good that the Metropolitan Museum will want it in New York in 1911. They would have taken it this year had not their limited transient galleries been overcrowded. As it is it will go to most of the important museums of the country and will be viewed by over one hundred thousand visitors. In the interest of art development, appreciation and education in our country, will you not give us your earnest help to the end that the Seventh American Salon may be an artistic triumph."

The Secretary, C. C. Taylor, 3223 Cambridge Avenue, Toledo, Ohio, will be glad to send a complete prospectus and entry blank to your address. All prints must be in the hands of the Secretary by October 1st, 1910.

DETROIT CAMERA CLUB.

Inasmuch as the Detroit Camera Club is somewhat young to have an exhibition of its own, the prize collection of the Round Robin Guild was secured and exhibited by it at the Detroit Museum of Art during the month of July. Much interest was displayed by the art lovers and photographers who were fortunate enough to view this attractive collection. The Club expects to have an exhibition of the work of its members next spring.

C. J. Schauer, Secretary.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

IN LARGER QUARTERS.

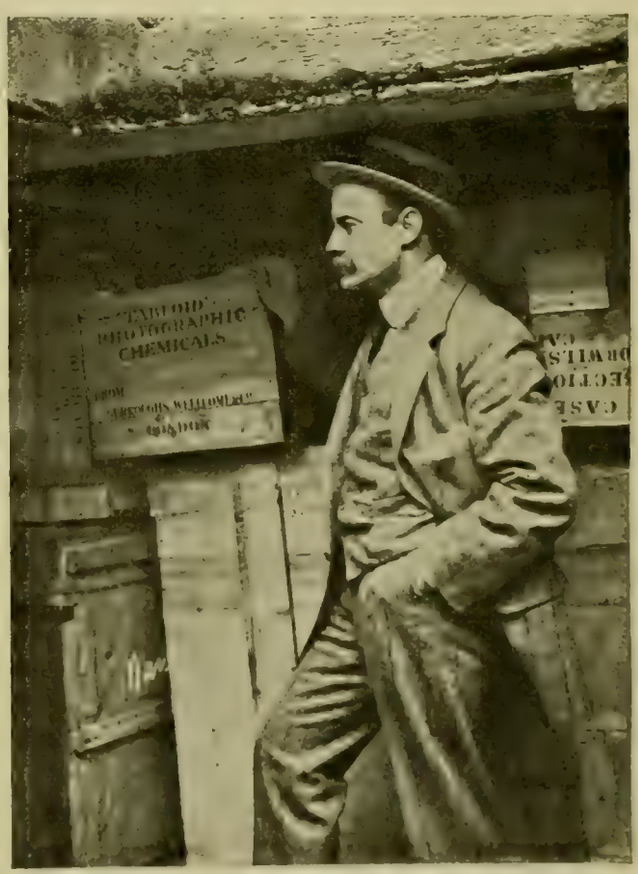
G. E. Biddell, the "Camera Doctor," so well known to all camera users in and about San Francisco, not to mention a host of our more distant readers, has found it necessary to move into larger quarters. He has recently fitted up a large shop in Rooms 504, 505 and 506, Williams Building, Mission Street, corner of Third, where he hopes to be able to cope with the increase in business with which he has had to struggle ever since his location downtown. Mr. Biddell manufactures and repairs photographic apparatus of every description; and, what is of more importance, does it intelligently and well, as can be proven by those who have given him a trial. No job is too small to receive his careful attention, and it would hardly be possible to find a job too large or complicated to be handled promptly with his full knowledge and superior equipment of tools and machinery. We have carried his advertisement for a number of years and have yet to hear of a customer who was dissatisfied with either his work or his prices.

A SPECIAL COURSE.

President Lively advises us that he is preparing a program for a special professional course, to begin about the middle of January and about four weeks later. Into this four weeks will be condensed an immense amount of work, and work that will be appreciated by those so fortunate as to be in attendance. The isolated professional who wants to brush up on his knowledge of all that is best in his work should make it a point to take this course. The value of the instruction offered cannot be questioned; a reference to a few of the testimonials furnished should settle that point in the minds of anyone not acquainted with the high standing of "Dad" Lively as an instructor; and, the four weeks spent in McMinnville at that season of the year will be found both enjoyable and inexpensive. A large attendance is expected, so do not delay writing. Address Southern School of Photography, McMinnville, Tennessee.

IN THE ANTARCTIC.

We are pleased to be able to show herewith a picture of Herbert Ponting, F. R. P. S., official photographer to the British Antarctic Expedition, 1910, from a photograph taken in the hold of Captain Scott's ship, the "Terra Nova," on the day she left London (June 1st). The



negative and print from which our reproduction was made were developed with "Tabloid" "Rytol," the developer upon which Mr. Ponting has decided to rely entirely for all his work. Burroughs, Wellcome & Co. have supplied all the photographic chemicals for this expedition, as they did for Sir E. Shackleton's.

CELEBRATES BIRTHDAY WITH $10,000 GIFT.

In the little town of Suessen, Wuertemberg, Germany, on July twenty-fifth, 1830, was born one who has done most to make Rochester famous throughout the world as the manufacturing center of optical instruments, and one, also, who enjoys the reputation of being one of the wisest and most benevolent employers in the country. That man was John Jacob Bausch, and to-day, July twenty-fifth, he celebrated the eightieth anniversary of his birthday in a characteristic manner by contributing ten thousand dollars to the fund established by the late Henry Bausch for the aid and relief of such employes and their families as may be in need, and by granting a holiday to all of the workmen with full pay.

Despite his four score years of unusually active life, Mr. Bausch is still in excellent health. He is at his office almost every day and takes a lively interest in all of the phases of the enormous business.

Mr. Bausch was waited on in his home this morning by a delegation of the nineteen hundred employes. William Marth, as spokesman, presented to him a solid silver humidor, eighteen inches long and twelve inches high, made by Gorham, a facsimile in miniature of the factory in 1865. It was a simple, one-story structure, rectangular in shape, with a gable roof and two chimneys. The roof forms the cover of the humidor, one chimney serves as a cigar cutter and the other as a lighter. Over one of the two doors is the sign: "Bausch & Lomb Optical Institute," as the company at that time called itself. The inside of the cover bears a representation of the present plant and the following inscription:

"Presented to Mr. J. J. Bausch by the Employees of the Bausch & Lomb Optical Co. to commemorate the Eightieth Anniversary of His Birth, July 25th, 1910."

Mr. Bausch responded feelingly, recalling incidents connected with the little old building and the early days of his career.

Considerate as Employer.

By his benefactions and his considerate treatment of his employees, Mr. Bausch has always enjoyed the most cordial and mutually helpful relations with them. He is also a large contributor to a fund which is maintained by the Bausch and Lomb families connected with the plant for taking care of employees in need in special cases that do not come within the constitutional rights and duties of the Mutual Benefit Association, which is maintained by the company and the employees. Moreover, he and Captain Lomb privately, together with the company, established a fund in 1900 to assist in providing a comfortable future for employees who have been in the service of the company many years. It is, in fact, a pension fund.

DURABILITY DEMONSTRATED.

At the Milwaukee Convention, just closed, there was on exhibition a Hall Mirror camera with a motor attached to wind up and drop the curtain of its focal-plane shutter, and this was kept going each day from the time the convention opened in the morning until it closed at night, and without changing the camera. This proved conclusively the durability and efficiency of the Hall shutter. The new Hall catalogue, on page 13, describes a like shutter test at the Sportsman's show at Madison Square Garden earlier in the year. Write the firm for one of these new catalogues. It will interest you.

A BACKING FOR TRANSPARENCIES.

A New York correspondent asks for some simple substitute for a ground glass or ground glass varnish for his transparencies. If he will make a saturated solution of white wax in ether and then dilute this with an equal amount of ether, he will have what he wants. Apply to the back of the transparencies in the same way as one would varnish the film side.

SIMPLE RAY FILTER

Small, unexposed plates should be fixed out and then immersed for several minutes in a one per cent solution of picric acid to which enough ammonia has been added to make its presence known by its odor. Screens so made are of course not perfection, but they will be found a great help, as a makeshift, where more perfect filters are not obtainable.

"THE MAHIN ADVERTISING DATA BOOK."

Regarding this valuable compendium of information for the man who makes up and places advertising, we can hardly do better than quote a letter from a user of the book, a letter appearing in a recent issue of the "Mahin Messenger." It reads:

Dear Mr. Rankin:—

If there is another 2½x5½ dimension book that embodies the concentrated brain-juice and right-to-the-finger-tips information for the man who wants advertising data that the Mahin Data Book does, I wish somebody would trot it out. Because I know John Lee Mahin—I know nobody is going to do any stunt like this.

Last year I wore out three Mahin Data Books. This year I asked you for three more, and one goes into my pocket wherever I go. The other two are always within easy reach on my desk, where I can use them scores of times each day.

This Data Book is such a corking, abbreviated bunch of ideas that I felt my students in the Central Y. M. C. A. advertising class could do no better than to invest two dollars in this book, and when I told them about it and asked how many wanted it, every hand took a jump into the air. So you understand why I have asked for a score of these Data Books to be sent by the quickest route to my office.

Thanks to John Lee Mahin, I know his Data Book. I use it. I wear them out for him. I appreciate them. Yours respectfully,

GEO. MATTHEW ADAMS.

The book is sent on ten days' approval; price two dollars. Address, Mahin Advertising Company, 125 Monroe Street, Chicago, Illinois.

THE NEW HALL LIST.

The new list of Hall Mirror Cameras has just reached our desk. It is full of information concerning these popular cameras, including the neat little Hall Diamond Mirror Camera and the excellent Portable Dark Room put out by the same firm. To add to the value of the booklet, it contains some thirty-two reproductions of high speed and other work of a high order; reproductions that can but prove highly interesting to the worker interested in high speed photography. All our readers are advised to send for a copy, a postcard bringing it. Address, The Hall Camera Company, 14 and 18 Dunham Place, Brooklyn, New York.

FINE SEPIA TONES.

A unique exhibit and one that attracted much attention and favorable comment at this year's National Convention, was the Kilborn Photo-Paper Company's display of sepias in first development. It is claimed that Kruxo papers yield the best possible sepias by any of the redevelopment processes, but that the first development process saves time and yields more brilliant prints with better gradations. They are making an attractive offer in our advertising section this month.

"OZOBROME: ITS NECESSITY AND USE."

This is the title of a very thorough exposition of the Ozobrome process, a process much in use in this country since the placing of the material upon the market by the Eastman Kodak Company. As a method of producing carbon enlargements it should appeal quite strongly to the user of small cameras. It is, as a process, simplicity itself. Just this week we have a letter from a subscriber saying that an enlargement which we made for him from one of his small film negatives has permitted him to make a full dozen fine carbon enlargements in Ozobrome, and he still has the bromide enlargement. The book comes as a much-needed manual of the process, there being, heretofore, hardly more than the one issue of the "Photo-Miniature," published in 1907, on the subject. The author of the book, Frank Dobson, is well known in England as an authority on the subject and he has the knack of presenting methods in a clear and understandable manner. The book is published by Percy Lund, Humphries & Company, Bradford, England. It can no doubt be obtained of Dawbarn & Ward, 122 East Twenty-fifth Street, New York; price 35 cents postpaid.

THAT "AGFA" BOOK.

In our July issue we called attention to the value of "The Agfa Book of Photographic Formulae," and closed by advising all our readers to send for a copy at once. This implied that the book was sent upon request and has caused some to believe the Berlin Aniline Works were not dealing fairly with those who had sent a label from a wrapper from some package of "Agfa" chemical and ten cents in stamps or silver for a copy. To obtain a copy of this valuable compendium of photographic formulae, one must send one of the labels, found on the wrapper of all "Agfa" photographic chemicals, and ten cents in stamps or silver, to pay for wrapping and postage. Do this, addressing your letter, "Berlin Aniline Works, 213 and 215 Water Street, New York." The book contains one hundred and sixty pages of formulae for the manipulation of all standard plates, papers and films, and a complete description of the working qualities of the best known developers and other products. The book is one that every worker should have at hand; and, as the "Agfa" products are obtainable at all dealers, the requisite label is easily obtainable the next time you wish a photographic chemical of high quality.

THE METZOGRAPH GRAINED SCREEN.

The process worker, be he photo-engraver, photo-lithographer, or worker in intaglio or photogravure, will be interested in a booklet just issued by A. W. Penrose & Company, Limited, 109 Farringdon Road, London, describing these grained screens and their application to the various methods of reproduction. The booklet is handsomely printed, has numerous illustrations and text matter that is instructive to a degree. Aside from the fact that only the Metzograph screen is considered, the book is almost a thorough manual of block making, describing, with the aid of illustrations, just how to focus, expose, develop and finish half-tone blocks. Copies of this booklet can be obtained free of cost from the above-named firm, and process working readers should avail themselves of the opportunity.

A TIMELY SUGGESTION.

With the dull winter months not far ahead, live studios and kodak dealers are looking for ideas that will brighten up these slow months. Now is a good time to be building up and developing lines that have been slighted in the busy season. Enlarging is pretty sure to be in this class, and yet enlarging, when properly pushed, is one of the most profitable side issues in the business. Many leading studios never let an order leave the house without an attempt to sell at least one enlargement, and it pays them well. A good negative will nearly always make a better straight enlargement than if worked out with the air brush or crayon, and is much cheaper to make. Fix up a few attractive samples in the different sizes and go after every sitting. The kodak dealer has the same condition to meet, with kodaks laid away for the winter and business dead. Get after your customers and get them interested in enlarging. Few of them know much about it; but, when shown just what can be done with their own films, they will become enthusiasts. You have the time now, and a little work at this season will pay well and lay the foundation for a good business in the busy months. Hunt up some good old customers whose interest in their kodaks is dead, and get them started. Another new field is opened up for the photographer, kodak dealer and postcard jobber. By the perfection of their automatic printing machine its capacity becomes about three thousand cards an hour. Ordinarily this would represent about three days' time for a fast printer and assistant. The cards lie perfectly flat, even after being in display racks for weeks. This addition to the appearance of the card is made possible by the "after treatment" and "drying," the cards being baked at a high temperature insures their remaining permanently flat. These cards, genuine photographic cards and cards of good quality, are sold at a price that is cheaper than the actual cost of production by the old-style hand process. If you have not already done so, drop a line to The Photo Craft Shop, 849-851 Ellis Street, San Francisco, California, and get complete prices.

Vol. XVII No. 10 OCTOBER, 1910 Price, 10 Cents

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CONVENTION PICTURE
By WADDS BROS.
VANCOUVER, B. C.

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Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, OCTOBER, 1910. No. 10

Out Into The Open

By F. Belmont Odell

With Illustrations by the Author

WOULD you know the keenest pleasure and rarest delight? Would you have a clear brain, and the red corpuscle in abundance? Then, some fine morning, bring along your view camera and come with me for a ramble out into the open where the red alder grows and the pussy willow bends to the pool.

I'll take you out to a brook which stretches through the lowlands of the meadow and enters the deep shade of the woods. We will follow this wonder stream until we have exposed all our plates, the searching out of interesting bits of landscape lending an incentive to continue the tramp, as well as making it intensely fascinating. If nothing within you responds to the magnificent splendor of nature and the restfulness of the multi-colored scenery, then you have been deprived of one great source of pleasure. At noontime we will enjoy the dainty lunch which we find tucked away in our carrying cases, and quench our thirst at the sparkling spring. We find at this point there is a picture which composes well within the limitations of our plate. Years afterward, when we come across this print in our portfolio, the music of the water, as it flows over a tiny waterfall, will seem to come back to us and we will revel in the

memories it recalls. Thus will we live for a day with nature; and, returning at sundown, we'll hie ourselves to the dark room and there have revealed to us the photographic mistakes charged against us for that day.

I am told that the tank and "daylight all the way" is the modern plan of negative making; and, while I do not dispute the claim, I do not take kindly to the idea. It is doubtless accurate and scientific as well as clean and fine; but an old black tray and the ruby glow for me. In my opinion, much of the pleasure of amateur photography is to be found in the dark room, and the person whose pulse does not quicken at the appearance of the image developing on some carefully-thought-out negative has not come to his own in a photographic way.

These rambles, which are arrived at by a few minutes' ride on the train or trolley, are fixed stars in my life; every Sunday and holiday, weather permitting, I (or, rather, we, for my wife always goes too) take these tramps out into the fields and woods. It is genuinely recreative, instructive and—expensive? No, not when compared with other hobbies, such as automobiling, clubs, billiards or theaters; and, take my word for it, wives appreciate their husbands' pleasure when its nature is such as to include them in all its operations. A light outfit is essential to the full enjoyment of photography afield; the 4x5 or post card size being suitable. Personally, I prefer the latter, as the resultant print is more symmetrical. I have discarded the heavy rubber and gossamer focusing cloth. A yard or so of black galatea cloth, costing about sixteen cents, answers the purpose admirably, and it can be folded up and carried in the pocket like a handkerchief.

Recently I had a batch of Velox and Kruxo prints come out of the wash stained a sickly yellow. The staining occurred in the hypo bath, but was not discernible in the red light of the dark room. I placed them again in the hypo bath and they cleared perfectly in less than five minutes. I have cleared up many spots on prints and negatives by returning them to the hypo; sometimes, after they have dried. Probably if they were properly hypoed in the first place this operation would not improve them; at any rate, I have cleared up many old negatives by this method.

I wash negatives thirty minutes as follows: Lay the negatives close together in a row on the bottom of the bath tub, emulsion side up. The bath spray is then attached, the spray end extended to the end opposite the faucet, and fastened with a wire bent to form a letter S; one loop hooking over the edge of the tub and the other one holding the spray. The water is turned on and regulated so that the spray falls downward on the slanting end of the tub and flows in a vigorous but not too violent stream over the negatives, washing them perfectly, in a short time, without danger of sediment depositing on the emulsion.

Black borders may be printed on pictures, without double printing, by removing a strip of emulsion from the two sides and ends of the negative. Ragged edges may be avoided, and the margin made uniform, by using a small try square. A strip of flannel cloth should be pasted to the under side of the blade to prevent slipping and to protect the negative from contact with the metal. I use the blade from a discarded plane to push along the edge of the

SUNSHINE AND SHADOW.

square. A folded towel should be laid under the negative. If it is desired to have a black border surrounded by a white margin, this may be done by cutting a mask from opaque paper a little larger than the portion covered by the remaining emulsion.

If I were to give to beginners the key to successful field photography, I should say, "Take your time." When you set up your camera, don't let the picture you see on the ground glass lure you into making an exposure. There are certain laws of composition, the violation of which means failure. These laws are simple enough to come well within the scope of the crudest amateur, and the beginner who is not sufficiently interested to learn and observe them should not attempt the work. Don't hurry; take time enough to regulate your sky and foreground, and to focus carefully. Avoid sharp angles; aim for graceful lines with reference to light and shade harmony. Straight lines running vertically or horizontally through your picture, cutting it in two or more parts, will spoil it. Having selected the best viewpoint, don't hurry. Stop and try to recall some of your past failures and avoid the causes this time; then examine your lights the instant before exposure. The sun may be obscured by a cloud and you must take this into consideration; a slight breeze may set the foliage in motion at the wrong time. Take your time and wait for a favorable moment to open the shutter.

Test the strength of the light, mentally, by noting the density of the shadow cast by your body, then remember this rule: Expose one second with

stop sixteen for subjects placed in the shade of a building or tree on a sunny day. Use this as a working basis for all your exposure calculations. Subjects placed between two buildings with the passage of light obstructed from two directions, double your exposure or open the stop to eight. Days when the sky is overcast, but not too dark, one-half second, or bulb exposure, will give good results if your subject is in the open away from shade. Compare the relative strength of light by noticing the shadows cast until you have developed your instinct to the point of determining the correct exposure to give under all ordinary conditions, always maintaining the equivalent of one second, stop sixteen, shade, sunny day, and work conversely from this point. It is assumed that you have already learned that decreasing the size of the stop one number doubles the exposure, and vice versa.

I made hundreds of incorrect exposures, and lost as many non-recallable opportunities to get good pictures, because I was guessing at exposures; then I ran across an article in "Camera Craft," by George F. Smallwood, containing the one-second-stop-sixteen-rule, which set me on the right track. Keep a record of all exposures, noting month, time of day, condition of light, subject, stop and exposure; then carefully examine the negatives with this record before you. If anything is wrong with them, you will know what it is, and know how to avoid the mistakes in the future; hence, progress. This is the only method of cultivating the judgment along these lines, and it is surprising how fast the careful worker will learn.

I keep a portfolio in which are placed prints from my choicest negatives.

IN THE PARK.

THE MEADOW BROOK.

THE SUNLIT PATH.

This album is a never-ending source of entertainment to myself and friends, besides recalling many pleasant trips out into the fields. Methinks as the years come and go the perusal of its pages will be more and more enjoyable. Below each print is written its title. A landscape or genre picture without a title is like a flower without perfume,

THE PATH.

SUNLIGHT.

Information That Is Not Information

By Fayette J. Clute

Some time ago I received a letter of inquiry from a correspondent who wanted to make some large negatives by flashlight, asking how much powder to use. I tried to tell him, as best I could, suggesting that he make a trial on a small plate, using about forty grains, the conditions being about so-and-so. To this I received a reply suggesting that, in the writer's belief, I knew nothing whatever about the matter, citing, as his reason, an article that appeared in the January issue of the "Professional and Amateur Photographer," a magazine published in Buffalo, New York, and edited by Felix Raymer. The article is unsigned; but, being a part of the only four pages not copied from other magazines, it is, supposedly, original matter from the editor's pen. We have all the more reason for our supposition, as an article appearing in the "Bulletin of Photography," dated October second, 1907, telling how to fire magnesia powder on a dustpan by partially covering it with a piece of twisted paper dipped in kerosene oil, bore Mr. Raymer's name. In passing, we might remark that magnesia is an oxide, entirely non-combustible, and even if the metal magnesium was meant, it could not be burned in the manner suggested.

Returning to the article our correspondent calls to our attention, it reads: "Personally, I know when I am using a Cramer Banner X 16x20 plate, Goerz Series III No. 9 lens, 24 in. focus working at F 7.7, and the lamp standing six feet from the subject that it is going to take just exactly 1 oz. of powder, no more, and no less, it makes no difference whether it is Nichols, Luxo, Victor, or any other." Rather a breathless sentence, but read it over again. I myself have not made, as this writer claims, "hundreds of them," but I have made a few. And I claim to know something about the action of a lens and the principles of light action upon a photographic plate. The idea that an ounce of powder, four hundred and eighty grains, is necessary with a wide-open lens and the subject only six feet from the flash is preposterous. It is simply absurd. The only explanation that can possibly be offered is that the writer of the article in question either seeks to advise about something concerning which he knows very little; or, that in his work he has found it possible to so heap up an ounce of some quick-burning powder giving a rather non-actinic light in such a way that the major portion was blown away by the explosion without being burned. This last even seems hardly possible, but charity should suggest some such explanation, particularly as the writer says that the form of the flash makes no difference.

But imagine an unsophisticated seeker after information, one willing to believe anything he reads, trying to make a flashlight picture such as the one reproduced herewith. Using the same lens and plate, he finds that he must stop down to f-16. Following Mr. Raymer's instructions to double the amount of powder for each size smaller stop, he determines that nineteen hundred and twenty grains, or eight of the ordinary half-ounce boxes, will be needed. Quite a healthy amount. Just imagine the effect produced in shattered glass, in alarm to the neighborhood, by the concussion and smoke.

MOTHER AND CHILD. By JAMES H. SMITH.

As we happened to be writing him at the time, we asked Mr. Smith, the maker of Victor powder, to secure a lens of the same make, size, and focal length, and make a negative by flashlight, advising us of the amount of powder required. This was done, except that the plate was the next largest size and the lens stopped down to f-16, both of which statements can be verified by an examination of the print. Mr. Smith made a fully timed negative with just thirty grains of powder—considerably less than Mr. Raymer's quarter of a pound. Of course, we have only Mr. Smith's word for the amount; but, as he is constantly on the road, it is an easy matter for some one to ask him to verify the statement by duplicating the experiment, as he advises me he will be

ready to do at all times; and this, despite the fact that Mr. Raymer italicizes the "I know" in the statement quoted early in this article.

It will be observed that he used only one-sixteenth the quantity that Mr. Raymer so positively asserts is the smallest amount required, at the same time using stop f-16, or only one sixty-fourth of the quantity Mr. Raymer would have used with the same diaphragm. Even should our correspondent follow the plan of some workers and use double the quantity advised by the manufacturer, he would still be getting the desired result, and still have a few of the eight half-ounce bottles of powder unused, instead of employing them all for one glorious explosion to produce a poor little 16x20 negative.

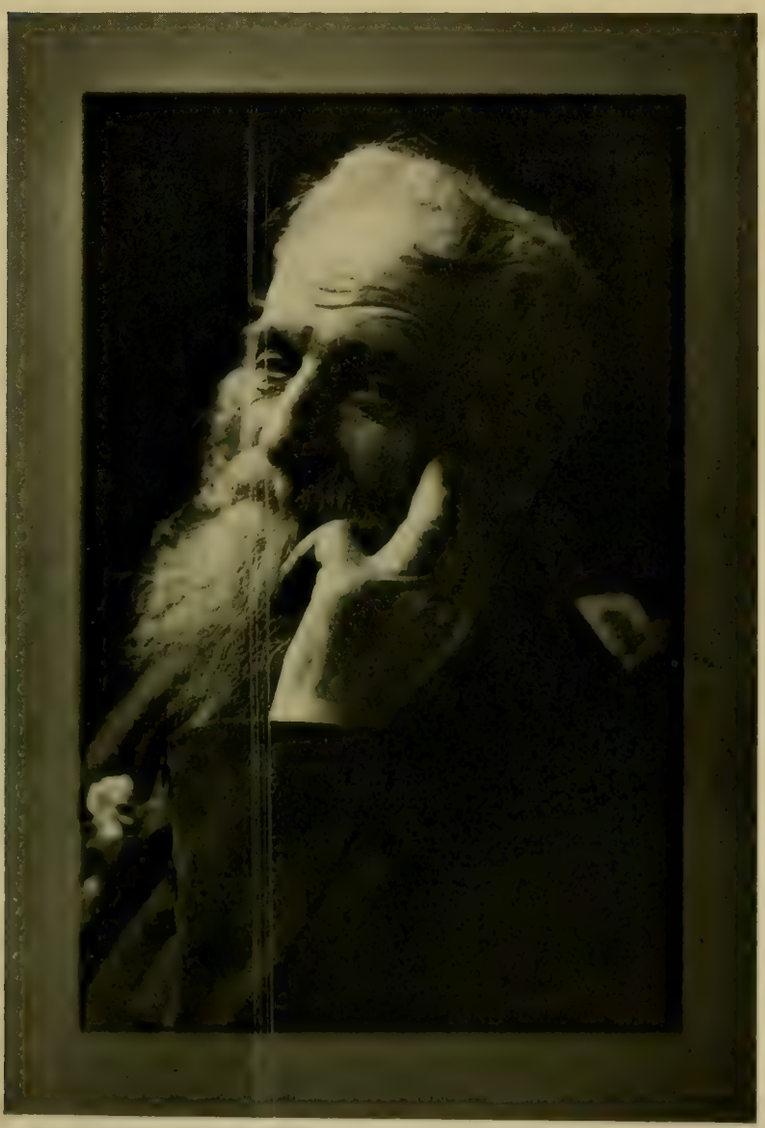
I have always been a strong believer in the efficiency and practicability of flashlight photography. I maintain that the average photographer fails woefully to realize the power which is placed in his hands by the several good flash compounds on the market. For this reason I desire to enter a protest against the placing of such advice as that quoted before unsuspecting readers, as it can only lead to the distrust of a utility which I believe one of the most valuable working assets the practical photographer commands. Mr. Raymer is an entertaining writer and lecturer on photographic subjects; and, on his favorite topic, studio portraitures, is particularly instructive. It is this fact that makes any misinformation from his pen more misleading, and our own dislike to correct him the greater. But I believe, in view of our correspondent's honest dilemma, a correction should be made for the benefit of others who may be in need of like information.

And, as to the picture reproduced, think what it would be to obtain such results with daylight, using a subject of the same kind. Just try to imagine yourself making the picture of the mother and child, the child an exceedingly restless one, with a lens stopped down to f-16, using daylight for the purpose. An operator would have wasted several of the 16x22 plates before securing a passable negative; while, in this case, there was absolute certainty that the one made was entirely satisfactory, the button being pressed to fire the flash at the very moment when the desired pose was taken by the subjects.

ON THE COLUMBIA RIVER. By J. H. FENTON.

Annual Convention

On the morning of August second, the hustling Vancouver delegation of photographers had everything in readiness before opening the Convention, so that when the meeting was called to order at 1:30 p. m. there was a noticeable absence of the usual confusion and noise attending an opening day. Vice-President Wadds, of Vancouver, in a few touching remarks, officially notified the Convention of the death of President F. G. Abell a few days before the meeting of the Convention, and deplored the sad circumstance that called himself to the Presidency of the Association. Immediately after roll call of officers, ex-President Ralston, of Seattle, offered the following resolution, which was unanimously adopted: "Whereas, an all-wise Providence has seen fit to remove from our midst our honored and beloved President, F. G. Abell, whose loss is deeply felt by each and every member of this Association, and by all who have come in contact with him; be it therefore



CONVENTION PICTURE.
By KING STUDIO, VANCOUVER.

"Resolved, as a token of the high esteem in which he was held by us, that this Convention adjourn for thirty minutes, and that no business of any kind be transacted during that period; and that this Convention now assembled extend to his family our deepest sympathy; that this resolution be forwarded to them and a copy of same be placed upon the minutes." At 2:00 p. m. President Wadds reconvened the meeting and the regular order of business was taken up. J. A. McCormick, of Seattle, was appointed Acting Vice-President for Washington, vice V. H. Surrey, who had not arrived; Ernest Peterson, of Tacoma, Acting Vice-President for Montana, vice Frank Ingalls, absent; J. B. Hann, of Bellingham, Acting Vice-President for Idaho, vice P. Van Graven, absent; and J. J. Stadden, Acting Vice-President for Oregon, vice H. J. Ritter, absent. W. C. Duryea, of Van-

couver, B. C., was, with the concurrence of the Executive Committee, appointed to fill the vacancy created by Vice-President Wadds assuming the chair.

After the reading of the Secretary's report, which was adopted and ordered placed on file, Mayor Taylor, of Vancouver, was introduced and gave the Convention a most hearty welcome to his city. Among other happy remarks, he explained that, although a convention of the chiefs of police of Canada was being held at the same time, we must not feel that there was any ulterior motive on the part of the city in arranging both gatherings for the same week. He was followed by Doctor Rowe, head of the Tourist Association of British Columbia, who eloquently set forth the resources of their country and the advantages of Vancouver as a convention city.

Resuming business, President Wadds announced the following committees: Auditing: Charles Butterworth, E. W. Moore, and A. G. Churchley. Nominating: O. W. Pautzke, J. E. Ralston, A. L. Jackson, Jack Savannah, and B. J. Brush. Resolutions: J. E. Ralston, J. A. McCormick, E. P. Chandler, and J. J. Stadden. Rating: Skene Lowe, A. L. Jackson, and J. A. McCormick.

After reading of communications and report of Auditing Committee, the latter showing a balance on hand of two hundred and fifteen dollars and thirty-five cents, the Convention adjourned till 8:00 p. m., when the conventioners met, and, in a body, enjoyed a trolley ride to beautiful English Bay, returning at 10:00 p. m.

Wednesday morning, the old, recurring question of prizes or no prizes again came up, following a motion that a committee be appointed to devise some means of encouraging the members to bring more exhibits to the next convention. Upon motion, the question was laid on the table until the Thursday morning session. The committee appointed at the last convention to investigate the proposition of affiliating with the National Congress of Photographers, gave an extended report of the aims and objects of such Congress and the conditions under which we, as an association, could join the Congress, but made no recommendation as to affiliating or not. This question, after considerable discussion, was made a special order of business for Thursday morning. The committee, also appointed at the last convention, to devise some method of securing legislation to protect the profession from the incompetent workman and photographic fakir, reported through its chairman, ex-President Ralston, that, owing to there having been no meeting of the legislatures in the different States belonging to the Association since the last convention, they had been unable to do anything; but that the committee expected to appear before the Oregon and Washington legislatures in the early months of 1911. On motion, the committee was given until the next convention to make its final report. Under "Good of the Order," many interesting talks were given along the line of photographic work, by A. L. Jackson, Skene Lowe, O. W. Pautzke, Jack Savannah, President Wadds, and other prominent workers; and it was all

too soon when the President announced that those in charge of the skylight demonstration were waiting at the King Studio. After this interesting and instructive demonstration, lasting until 12:30, the members adjourned for dinner. At 1:30, Mr. Brady, of the Eastman Kodak Company, assisted by Messrs. O'Connor and Smith, called the roll for the School of Photography and gave an expert demonstration of Artura papers. At 4:30, half a dozen tally-hos drew up in front of the hall and it was "all aboard" for a two hours' ride through beautiful and picturesque Stanley Park. At 8:00 p. m. the Convention was called to order and the members were treated to an instructive and entertaining lantern slide exhibition by Professor J. A. McCormick, of Seattle. Over one hundred slides were exhibited, showing many pretty scenes on and about the famous Puget Sound.

CONVENTION PICTURE.
By EMERY, VANCOUVER.

Thursday morning, the Convention was called to order, and, under regular order of business, Tacoma was selected as the next convention city. Vashon Island, where the annual Chautauqua assemblages are held, was much favored, but Tacoma was finally selected. The matter of affiliating with the National Congress of Photographers was taken up, and, after full discussion, the unanimous decision was that while the Association was in sympathy with the work and aims of the Congress, owing to the great distance between our territory and that of the usual meeting places of the National Association (of which the Congress is at present a part), it would be impossible to secure delegates willing to attend; and that for the present at least no affiliation be made. The Nominating Committee stated that it was not ready to make its report, but would be ready by the time the afternoon session was called. Time requested granted. As unfinished business, the matter of prizes was taken up, and, after discussion, the

CONVENTION PICTURE
By SAVANNAH, VICTORIA

following committee was appointed to devise some feasible way of securing a better exhibit of pictures at the next convention: Jack Savannah, Skene Lowe, A. L. Jackson, W. C. Duryea, J. E. Ralston, Ernest Peterson, F. L. Hacking, O. W. Pautzke, and J. B. Hann. Next followed a talk upon the

work of the Copyright League of America, by J. A. McCormick. It was moved and carried that our Association unanimously vote to sustain the work of the League and the Committee on Resolutions be instructed to draw up a resolution to that effect, said resolution to be forwarded to the officers of the League. At 1:30 the School of Photography was again opened, this time in charge of Professor Muller, of the Ansco Company, assisted by Mr. Stansbury. Cyco, and the different grades of paper handled by his company, were printed, developed and fixed, the different processes holding the attention of the large crowd present until 3:00 p. m. Following this was an interesting demonstration of the new Eastman Platinum paper by Messrs. Brady and O'Connor. At 4:00 p. m. the Convention again assembled and the following officers for the ensuing year were placed in nomination and, on motion, were unanimously elected: V. V. Vinson, of Vancouver, President; J. A. McCormick, of Seattle, Vice-President; J. E. Ralston, of Seattle, Secretary-Treasurer; Ernest Peterson, of Tacoma, Vice-President for Washington; J. J. Stadden, of Marshfield, Vice-President for Oregon; Fay E. Ward, of Missoula, Vice-President for Montana; F. L. Hacking, of Vancouver, State Vice-President for British Columbia; State Vice-President for Idaho to be appointed later by the Executive Committee, no delegates being present from that State.

CONVENTION PICTURE. By JACKSON, TACOMA.

The Committee on Exhibits for future conventions recommended that the following plan be tried for the next convention: That five pictures be selected from those on exhibition to form the Official Exhibit of the Association for 1911, said pictures to be selected by ballot; and that an additional one be selected strictly for its artistic merit, such selection to be subject to discussion and criticism by the Convention, and this picture to be selected also by ballot. All pictures entered for this competition to be unmounted and unframed, any size and any style. Also, that prize medals be offered for foreign competition. These recommendations were unanimously adopted.

On motion, the new Secretary-Treasurer was instructed to issue a

quarterly booklet the coming year, a copy of each to be mailed to every member of the profession in the Pacific Northwest; said booklet to contain all matters of interest to the fraternity and members of this Association. Following this, O. W. Pautzke, A. L. Jackson, Jack Savannah, B. J. Brush, and J. A. McCormick qualified as bondsmen for the Secretary-Treasurer-elect; and, on motion, were accepted as such by the Association. At 8:00 p. m., the Convention was called to order by President Wadds, who stated that arrangements made by him previous to the death of President Abell would necessitate his leaving for the East by the morning train, and that Vice-President Duryea would preside during the remainder of the session. After reading of minutes, Skene Lowe gave an instructive address on the subject of "Art in Photography." Following this, A. L. Jackson was called, and, after a few remarks complimenting President Wadds upon his efficiency as a presiding officer, presented him, in the name of the Association, with an engraved, gold, life membership badge, the first gift of the kind to any officer of the Association. Then, turning to your retiring Secretary-Treasurer, with similar complimentary remarks, presented him with an elegant gold watch, engraved as follows: "W. G. Emery, Sec.-Treas. Presented by P. A. P. N.-W., Vancouver, B. C., 1910." The President and your Secretary responded as best they could in appreciation of these tokens of esteem; and, speaking for both, I can assure the members that they will always be treasured by us as mementoes from the dearest of friends and comrades. An orchestra, provided for the occasion, broke in on the exercises with a lively two-step, and no adjournment was necessary. The chairs and easels were pushed out of the way and the rest of the evening was given over to music and dancing.

At 9:00 a. m. Friday, over one hundred members boarded the steamer "Britannia" for an all-day excursion to Bowen Island. Arriving there, the exercises consisted of dinner, foot races of all kinds, a baseball game, and other sports; prizes of value being donated to the winners. After the sports the members adjourned to the beach, where many of them enjoyed the luxury of salt-water bathing. The final business session was held on the boat during the return trip; all unfinished business was given attention and the usual resolutions, complimentary to the Mayor, the home photographers, the press, and the stock dealers, were unanimously adopted. An estimated report by the Secretary-Treasurer showed a probable gain of two hundred dollars in our finances.

In concluding this report, which concludes five years' continuous service as an officer of the Association, one year as President and four years as Secretary-Treasurer, I desire to heartily thank one and all for the assistance rendered me at all times, and for the several tokens of appreciation you have seen fit to present to me. I desire, particularly, to thank the dealers and manufacturers, and their genial representatives, for the liberal patronage which has made our conventions financially successful, leaving each year during my incumbency a balance on the right side.

Very truly yours,

W. G. EMERY, Secretary-Treasurer.

Printing With Magnesium Ribbon

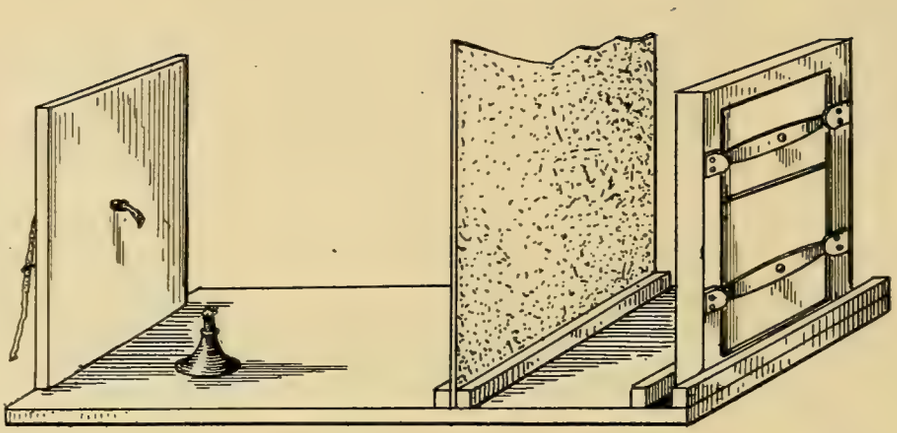
By Earl J. Houser

A WAYSIDE SMOKE. By S. J. ADAMS.

THOSE who, like myself, are not blessed with gas or electricity with which to do their printing, should try magnesium ribbon. I can, from actual experience, strongly recommend it; and even some of those who have one of the former will adopt the ribbon in preference thereto, if they will but give it a trial. They will adopt it for all their printing of developing papers on account of the ease and rapidity which it confers.

Since joining the Post Card Division of the I. P. A., I found that I had need for more cards and prints for exchanging than I could make after supplying the demand for home consumption. I was using an oil light; each negative requiring on an average of one and one-half minutes to print. Having heard of magnesium ribbon being used for printing, I resolved to try it.

The first thing I had to do was to find some way of handling it; finally adopting the following plan, a plan that works entirely satisfactorily. I first got a board about three feet long, eight inches wide, and one-half inch thick. The drawing accompanying this will explain at a glance how it was employed. I use an 8x10 ground glass, a 5x7 printing frame, and get an even illumination with the frame six inches from the former, which, in turn, is twelve inches from the light. As shown, a portion of the board is cut off and fastened at right angles to the longer piece. A metal tube must be fitted through the center of the upright piece, seven and one-half inches above the base, through which the ribbon is fed. For this tube I find the handle of a mucilage brush answers very well, cutting off the brush part and opening the other end. The



frame, ground glass, and light must all be centered.

The ground glass is simply used to diffuse the light and lengthen the exposure, as about half an inch of the ribbon is likely to over-expose a print from a thin negative. I find that this amount is the shortest piece that can be conveniently burned. When ready to print, I cut off two or three feet of the ribbon, run one end through the tube, letting it extend through as far as has been determined to be the necessary length to give the correct exposure when burned. I find that one inch will print an average negative on normal paper. I keep a lighted torch close by and when the printing frame containing the negative and paper is in position I use the torch to light the ribbon. Only the portion that projects through the tube will burn. After having decided upon the length of ribbon necessary for an exposure with the negative in hand, one can repeat the operation until all the exposures are made, developing the prints all at one time later.

For a torch I purchased a small oil can, cut off all but an inch of the spout, passed some wool yarn through it, and filled the can with alcohol. I like this much better than a candle, as it is much more convenient and there is no melted tallow dropping around.

Magnesium ribbon can be bought from almost any photographic dealer, and if yours does not keep it he can easily get it for you. It sells at about sixty cents a roll; the amount I am not sure of, as I never measured it, but it is very light and there must be at least a thousand feet. I have printed several thousand cards with one roll and it is still half unused.

To my photographic friends who use a large quantity of gaslight paper I would recommend this method; feeling confident they will continue its use, finding it will save them time as well as gas bills.

The Aristocracy of Art

In speaking of that most ancient and universal form of hero, the king, Carlyle traces the word to the same origin from which we have our word "can." The king is the man who can, the able man, the "man who does things," as we say in modern parlance. The man of deeds and power will always be a ruler in his own right; and a class of individuals who, by natural gifts and cultivated talents, excel in some particular field of human thought or activity will form an aristocracy by the only "divine" right ever possessed by man—initiative and originality.—E. LEAVENWORTH ELLIOTT.

Running a Studio Right

By M. L. Lemon

Our Prize Article for October, Winning a Wold Air Brush

Here we are. Howd'ye did, everybody.

Let us take the show case first; that cabinet in which to preserve dead flies and dust. It should never be touched or its contents changed under any circumstances or on any account.

Next, we have the printing room. "Printing Room: A dirty place in which to preserve useless plunder."—Webster. Try walking in and out twice a day, dragging a broom after you; it won't hurt the floor in the least. A box or barrel takes up but little room and makes an excellent receptacle in which to put waste. Besides, should you ever happen to have ten cents and drop it on the floor, you would stand some chance of finding it. If the room is a closed one, such as is used for developing paper, the cat might wander in and get suffocated if the door was shut. Let a stove-pipe elbow into the wall near the floor and another near the ceiling. If you are using the old-time wooden trays lined with oilcloth or a coating of wax, keep on. They go wrong and leak until you find yourself using one or two for everything from developing to sepia toning after fixing, and that saves room that several trays would take up. But if you want to be reckless once in your life, get some quarter-inch dressed lumber and cut it up for a set of trays ranging from 8x10 to 24x26. Make two in which to wash prints. Washing with running water is fine, but passing prints from one tray of water to another is finer; you know that fresh water reaches the entire surface of each print several times. If you have confidence in the running water plan, try it the next time you tone a batch of sepias by letting the water run on them as they come out of the bleacher, for half an hour. Then turn some of them over and see how much color remains. Don't put them in the toning solution if you want good sepias, though. A half hour of changing from one tray to another would have washed them perfectly. It is the same in removing hypo after fixing, although the color is not there for you to see. Make a tray in which to put the test prints as they come out of the hypo. A small one will do. Make one for the sepia toning of your developing papers. Make a good, generous one for the toning of collodion papers in gold or platinum. Trays large enough to handle any batch you may have cost so little that there is no excuse for overloading.

These trays, of course, have to be painted and, for that purpose, use paraffine paint; not the kind used for roofing, but a less crude kind used for your purpose. Give the trays two coats, allowing the first to become thoroughly dry before adding the second. If the surface is not quite smooth when dry, take a broken negative and scrape down any rough places. And don't be afraid of the paraffined trays. I have seen tens of thousands of collodion prints toned in them and never a spot that could be traced to the paint. You will have a set of trays that, with an occasional coat of the

paint, will last a lifetime. Don't keep them on the floor to collect chemical dust. Bore holes in the wall over the sink, insert wooden pegs, and hang them up when done with and rinsed out. If you have any old, pitted, vulcanite trays, give them a coat of the paint. If the hose refuses to stay on the faucet, tie it on, give the lap a thick coat of the paint, and let it dry. Put a coat of it on top of the old printing shelf and it will lay the splinters. If you label your bottles, grind a patch with emery and put the label on with the paint. If that measly reception room girl comes in and paws over the untoned prints to see if Mrs. So-and-So's prints are done, put a dab of the paint on her nose and she won't return. I did, and it worked fine.

Cut a little slot in a board, fill it with emery, and run the wheel of your oval trimmer up and down in it. It will make it nice and sharp. To keep the oval form from slipping, press the top end against a nail or a stick tacked to the table. When printing, do not be bothered taking off and putting on a tight fitting cover each time. Turn one-half of a larger plate box over paper box and the other half over the box the prints are kept in. If in doubt as to which is the sensitive side of the developing paper, keep a few boxes ahead and remove the oiled wrapping; the paper will take a slight curl, sensitive side inward. When white drapery is not quite dense enough to justify cutting out the tissue over frame, rub a little fine red or yellow dry distemper or rouge over the face and hands on the tissue, to hold them back in printing. Properly used, this dry color is a great help. Hang the dusting brush and the pencil by an elastic cord over the shelf where frames are loaded. They will not wander off, and will always be right at hand. Make a print pick-up by inserting a piece of whalebone or aluminum in the end of a penholder, and plug up the rest of the hole. The bone can be bent to any desired shape by first warming it.

When exposing your developing paper, try to get within shouting distance of the correct time rather than work so that you have to grab the print out of the developer and jam it into an acid shortstop and then into the hypo, as if it was red hot and burning your fingers. Get the time so that you can, when it is almost developed, take it out, rinse it in clear water, watching it reach just the right point, and then into the hypo. The right time will be indicated by a general brightening up of the whole print, and it will, when dry, have all the brilliancy and detail that the negative is capable of giving. The prints will sepia better, and there will be no need of drying the hands each time to prevent carrying acid into the developer. And, remember, the manufacturer, capable of turning out the present-day high grade of plates and paper, probably knows more about the correct formula for a developer, than you, who couldn't make a plate or a sheet of paper if you stood on your head for a week.

When you mount, don't pile the prints all on the 8x10 glass, and paste one at a time. Make a mounting board about 20x32, and cover it with white oilcloth. Separate the prints into piles according to size, in the last wash water. Put down the largest ones first, starting well away from the edge, and make each succeeding layer overlap the edge of the one below, finishing with a layer of the smallest size. Then the edges will not dry out

LITTLE MISS MISCHIEF.
By NICK BRUEHL.

and stick, if they are gelatine prints and the weather is warm. Blot off and paste the entire upper layer of the shooting match at once. Working in that way the girl will learn to jump while loading racks. Don't paste one at a time, and walk half across the continent to put each mount in the rack; bring the rack up to the mounting table. Make the racks out of half-inch clear pine, about four inches wide, and the same distance across. Saw slots across the top one-fourth inch deep and about an inch apart, so as to hold twenty-five or thirty mounts. Make a frame against the wall on which to keep them, where they will be out of the way and not collecting dust and fly specks.

Keep the mounts always in one place; those used most to be the handiest; the small ones on top shelf and the heavier ones below. Place them so that ovals and squares of the same kind are together. Each style of mount should be given a letter to represent it, the one letter answering for all sizes of that style. When printing, mark on the back of each print the letter indicating the mount, the letter being placed on the negative before it goes to the printer. This will avoid the necessity of waking the dead in the reception room to find out on what mount each print goes. When mounting, take down the small mounts first and put each kind in a separate pile in front of the mounting board. With prints on this board as advised, the small prints are all mounted first, and then the remaining mounts can be replaced on the shelf and the next size proceeded with in the same way. The table will be kept clear and not look like a bargain sale in mounts. When dry, put a dab of spotting color right alongside of each white spot caused by dust; burnish if necessary, put in bags, write on names and amounts due, and put on shelf in alphabetical order so that anyone can find any desired order without searching for more than an hour. There is some controversy as to the advisability of making extra prints, but counting the cost of the overs against the shorts and the extra time making them, the law of probability makes them balance about even. Printing overs, therefore, simply assures prompter delivery, and that is a valuable feature

Get a stone crock with a cover and keep it full of a saturated solution of hypo. It is so much handier than waiting for crystals to dissolve. If you are in the habit of evaporating hypo solution on the floor, stop doing so and you will have less trouble with your paper. The same with the practice of weighing out pyro over the drying blotters. Stop that practice and your prints will look less like speckled beauties.

After printing, before they go to the retoucher is better, put each negative in an envelope and write on the name and number; and if you print extras, put in the left-overs also, saving out extra good ones for the show. When three or four dozen have collected, put them in empty plate boxes and number the ends, "1 to 10," "11 to 20," and so on, not waiting until it will amount to a day's work. Then, for sure, you know where each negative is, clean and unscratched, available at a moment's notice. Have a place for everything; and, if the place is found good, never change it. Then, when you want a thing, instead of running around like a chicken with its head cut off, you can turn to it subconsciously.

WINTER HAZE. By J. H. FIELD.

Wash off faucets occasionally; they will collect quite a crop of chemicals from the hands, which, dripping into trays, may cause trouble. Remember that there is nothing cheaper than hypo and water, and you can't have better friends, but improperly used, they can cost you your business. And don't use your bromide paper developer until it is liable to be mistaken for ink, as I once saw done. If you are printing by electric light, count time by numbers, so many per second, and write the number on each negative as it is printed. This saves retesting if you have to print duplicates or shorts. Make the switch to your light work by a spring foot treadle, and save time and electricity.

In copying two single figures into a group it is often a good plan to cut around the outline of one or both, partially or all the way around, scraping down the edge very thin and overlapping if necessary; then paste on an old print of generous size having a suitable background. An arm can often be bent to rest on a chair or the shoulder of another figure, with a little brush work. If the cut-out figure be first pasted to a narrow strip of cardboard and this in turn pasted to the picture having the desired background, an apparent relief will be secured. When you are copying a picture, put it against glass in a large printing frame with a piece of newspaper behind and showing all around the edge. This will give you the printed matter to focus on and the desired amount of sharpness or slight diffusion can be secured. To shade different parts of an enlargement at the same time, take a piece of clear glass, hold it in front of the projected

image and put a dab of opaque the required shape wherever needed; then move the piece of glass during the exposure as you would a single shading piece on the end of a wire.

Now! This is the operating room, where they know it all; so excuse our butting in. We only wished to mention, in case you had forgotten, be sure and leave the door of the dark-room open so that the patrons can see that old pyro-stained towel and the collection of dirt beyond; it gives a genre appearance to the view. And don't neglect to explain carefully to the sitter just what you consider a good picture should be like; how her own ideas are entirely wrong. She is only one of the blessed public; consequently knows nothing about it; and will surely come again if she gets what she doesn't want. Be very courteous to the rich patrons; they expect it. The other kind don't matter; their money is doubtlessly wooden, anyway.

Leaving the glare of the skylight; it was cleaned the first week after it was built; we pass into the dark-room; and, closing the door, step on the dusting brush lying on the floor. We are duly thankful it is not in its holder or hanging by a cord, as it helps us to locate our feet in the dark. Out of the blackness ahead a voice is saying: "I wouldn't give a snap to see my competitor's negatives; and as to a plate demonstrator, I never yet saw one that knew anything." As the white light is turned on we observe that our friend believes in the modern way of keeping exposed and unexposed plates; that is, in the original boxes. It must have been our grandfathers that had a light-tight box with a weighted cover to drop into place and fitted with compartments for the several sizes used. We saw one of these on one occasion in the dark-room of what was supposed to be a progressive photographer. He used to spend good time keeping this stocked with several dozen of each size, placed face to back, cut to size when necessary, and all ready for loading. It was nailed to the wall just above the loading shelf, with ruby light right alongside and the dusting brush tucked in its little holder beneath. It is not a good plan to cut plates before the sitter goes into the operating room, but to chin with the girl in the reception room until she passes in. Then, while you are cutting the plate for the holder the sitter has an opportunity to size up the place, polish up her sarcasm, or watch the baby get ready to let loose its noise works. Also, test the diamond each time to see which is the cutting edge. If one only tests twice on each plate and cuts ten plates a day, it amounts to only one hundred and forty-six thousand test cuts in twenty years, which is much easier than cutting a notch in the handle just once.

The reception room: It should, of course, be kept neat to harmonize with the operating room. Cover the walls with time-toned sepias, and have an old spittoon ornamenting one side. It helps to make business—for the other fellow.

But, enough. Let's be cheerful as we pass out. That longer word in the middle means more of that root of all evil, which we all want, than all the high art that was ever quarreled over. Give your customers a smile as they come in, while they are in, and as they go out; for cheerfulness begets cheerfulness; which, in turn, begets an open hand.

Photographs Direct From Nature

By J. M. Kane

With a camera as our companion, we amateurs wander far afield in quest of glorious autumn views; particularly after the first frost comes and paints nature in such vivid colors that no artist can hope to reproduce them with any degree of success. With all enthusiasm we set up our cameras before some old rail fence covered with wild grape vines, or perhaps the ever-beautiful Virginia creepers resplendent in those brilliant colors they are capable of showing. Or, again, it is a piece of woodland, a tangled thicket, or a rambling brook, but with the aftermath of autumn coloring giving it a charm that is irresistible. We expose plate after plate, never giving a thought to the long exposure required, snapping it at one twenty-fifth, perhaps using a color screen and giving it a half second. We forget, or do not know, that our screens will slow up the light from these reds, yellows and greens from six to ten times, perhaps longer, despite the fact that it may be called a four-time screen. We do not take into account the fact that the screen simply cuts down the activity of the blue light without increasing the actinic value of the reds, browns, yellows and greens. It would be better to double or even quadruple our exposures; better to slightly overtime and use a less strong developer.

Even with correct exposure and development our plates will be a disappointment when we come to print from them. Those grand views with their kaleidoscopic effects of color will be flat and uninteresting. And the moral of all this is: Use orthochromatic plates and ones that are non-halation; use a light color screen; and give plenty of exposure. If you have been in the habit of using one twenty-fifth second, or even one-half second, give one to three seconds, and longer if it is late in the day. Dilute your normal developer about four times, and do not carry development too far. My word for it, you will be better pleased with the results.

But I have digressed from my subject somewhat in an effort to show

you that while the orthodox negative of an autumn landscape was inclined to be disappointing, Nature herself, at the same season of the year, could supply us with negatives all ready made that would prove most gratifying. They can be found at our very doors, in our gardens, or along our path as we walk afield. Take the leaf of the hard maple, silver birch, woodbine, or any leaf or frond of any of the late foliage plants. Select specimens with fine color markings and free from holes. Either fresh or dried specimens can be used. Clean off an old negative glass and put it in the printing frame. On this place the leaf, face up; then the paper, then a pad of felt or several sheets of blotting paper, and lastly the back of the flame. If printed on Solio or the like, print for the full detail of veining, allowing the space around the leaf to come as black as it will. Printed on one of the gaslight papers, they can be colored with Japanese transparent water colors in perfect imitation of the originals.

Perhaps the best plan is to select the leaves at the proper season and place them aside to dry between blotters, under pressure. The small maple leaf from which the border herewith is printed is one that I have had for two or three years. Another one that I have with a quite fragile stem and texture has been permanently stuck down to its glass plate by giving the plate a coating of transparent varnish, laying down the leaf as it became sticky, and then applying a coat of varnish over all. In using fresh leaves there will be found some that have a rather succulent stem, one inclined to exude juice and stain the printing paper under pressure in the frame. These should be placed between blotters, under pressure, for a day or two, in order to overcome this difficulty.

And as to a use for these natural negatives, or prints from them, hundreds will suggest themselves. With a large collection, one can make up a most interesting album. Most of my own have been gathered in the local city park; and, I recently found out that the superintendent could give me both the common and botanical name of each leaf as shown in my prints. And he was glad to find some one interested in his friends, the trees under his care. No doubt the same assistance can be secured in any town or city. If the prints are colored and the collection is made up of leaves of the well-known trees and shrubs common to one's own location, properly titled, a small album of them makes an acceptable gift to almost any one. Blue prints from these negatives are not to be despised. A number printed from one leaf negative, trimmed square and used as a border, is very effective. Taking the gaslight prints (and I would refer the reader to an article in the March issue on using the Japanese transparent colors), coloring them is simplicity itself. If you do not produce a work of art the first trial, try again. You will soon learn to so blend the colors as to make the prints harmonize perfectly with the originals, and you will be delighted with the resultant prints. The matt surface papers are the best to use, as they take the colors better than the glossy kinds. Or you can use some of the printing-out papers with a dull finish, such as Aristo-platino, Seltona, and others. Bromide papers are also good. For Christmas cards, luncheon favors, card parties, post cards, calendars, birthday cards—in fact, most any social event, these prints can be used to good

effect. Leaves, either printed at the corners or around the edges as a border, with the printed matter in the center, make most satisfactory mementoes. As a calendar decoration, use a different leaf for each month, as your fancy may select, placing it at the top or at one corner of each leaf of the calendar. Again, as a luncheon favor, use cards for each plate with leaves of various sorts or arrange in various ways, on them. Your guests will be pleased and will keep them on account of their novelty as well as their beauty. As a post card, the colored leaf print will be prized far more than the cheap trashy ones so much in evidence. They will not be consigned to the waste basket as soon as they are read. Another, and, to my mind, the best way to use them is to make a bromide enlargement of your favorite landscape, say up to 4x6 or 8x10, run a border all around the edges, using some small leaf; coloring to

DOGWOOD. THREE-LEAFED WOODBINE SUMAC.

harmonize. Your enlargement will require a mask with a margin wide enough to permit the leaving of a clear white line between the print and the leaf border, also outside them. An autumn print, done in this way and tinted in natural colors, would be a joy to see, and would repay you many times for the trouble.

Very striking effects may be had from these prints by using them in lamp shades or in fire screens. They can be made quite transparent by waxing them on the backs and using a hot iron to melt it into the fiber paper. Placing them between sheets of glass in a frame will bring out their beauties, particularly when placed before an open fire or used as a lamp shade.

The border at the head of this article is a fair example of one of the many decorative uses that can be made of these prints, prints from material that is at our very hands. Let those who are ever looking for something new and out of the ordinary, beaten track, try their hand at this very interesting branch of photography. They will be surprised at its beauty and use. I will say, in connection with this, that one need not be an expert at coloring, neither need one be able to select the exact shades in doing the work. The coloring

may be decidedly off and still give beautiful results. I have before me, as an example, a print of a sunset over a marsh or lake. The colors are far from being correct, yet it is a beautiful print. So if you are not an expert at choosing your tints, never mind; do the best that you can and your prints will be sought after so much that you may be able to turn a few ducats into your pocket by doing work for friends, friends who will only have to see your work to desire theirs to be as good.

The prints sent with this article have not been selected for their beauty; rather, they are the first to hand and sent as showing how clearly the leaves are reproduced. The prints from which the border is made up are some that I had on hand that were printed a little too light for the best results. I want this article to reach the editor in time for the September issue if possible, and for that reason have not taken the time to make new prints. Such prints as I have on hand are colored ones, with the exception of these few, and they would not reproduce well, I feel quite sure.

IN A FARMHOUSE KITCHEN. By GRACE E. MOUNTS.

What the Flashlight Will Do in the Studio

By W. G. Earle

I am sending the editor two sets of three prints each of some pictures of a child that I took a few days ago, the set of three showing the subject with both arms in the air is a little better than the other set, as there is more variety in the expression. If you reproduce but one set, I would suggest this being used, although the other set is equally good from the technical standpoint.

They were all made within less than twenty minutes, and not a single one was defective in any way. They were made with a Victor Flash Cabinet, three grains of powder being used for each. A Bausch & Lomb portrait lens was used, opened to f-5. All were made on Cramer Crown plates.

These child poses are certainly pleasing and characteristic, and particularly the one with the hands in the air, such that it would be practically impossible to duplicate with daylight, or with any other form of artificial light, even admitting that a shutter was used that was quick enough for the purpose. The next one, the one showing the tips of the fingers together, is another pose that is never caught with the ordinary studio shutter. The hands of the little subject were in constant motion, and this particular position of the hands was not held for even a quarter of a second With the flash, of course, the shutter is of no importance, as the exposure is only equal to the duration of the flash. Six of these negatives were made in rapid succession, and all were perfect; in fact, they could hardly have been otherwise.

The article on flashlight work in a former issue has inspired me to

The article by Mr. Southworth in a recent issue has inspired me to send on these pictures, together with a few words concerning their production. I have done but very little flashlight work; but my experience

distance of subject from the camera and flash powder for full figures or groups on large plates.

with the Victor powder and the Victor Flash Cabinet is such that I am pleased to add my word of praise for flashlight work.

At the request of the editor, who has asked if I make large negatives and if I will give him particulars concerning powder required, I am following up the child pictures with a contact print from a 16x20 negative. I do not know just how much powder was used as I do not remember the size of the stop; but my rule is to use three or four grains with my lens wide open, seven grains for f-8, fifteen grains for f-11, and thirty grains for f-16, and the practice always gives me excellent results. The flash is always the same distance from the subject; hence, the size of plate makes no difference. Were the flash at or behind camera, a greater would then necessitate more

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"I have far within me a belief, that art is the love of certain balanced proportions and relations which the mind likes to discover and bring out in what it deals with, be it thought or the actions of men, or the influences of nature, or the material things in which necessity makes it to work. I should then expand this idea until it stretched from the pattern of earliest pottery to the harmony of the lines of Homer; and say that in our plastic arts the relation of lines and spaces are the first and earliest desires, and these needs are as needs to the soul, and echoes of the laws of the universe seen and unseen, reflections of the universal mathematics, cadences of the music of the spheres. For I am forced to believe that there are laws for our eyes as well as for our ears, and that when, if ever, these shall have been deciphered, as has been the good fortune with music, then shall we find that all best artists have carefully preserved their instinctive obedience to these, and have all cared for this before all."—John LaFarge.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, OCTOBER, 1910. No. 10

Shop Talk

The magazines in the general field have found it quite profitable to run a couple of pages each month, using some such title as the above, taking their readers into their confidence, after a fashion, by explaining more or less fully what they propose to do, what they have in store for their readers, and what their aims involve. In saying they have found this profitable, we do not mean to assume that they find such use of such space is directly responsible for any great increase in their revenue; what is evidently the result is the bringing forth of a closer relationship between their readers and themselves. And such a condition is always profitable for the magazine enjoying it. In our own case there is, naturally, a good amount of this friendly feeling bestowed by practically all our readers. The simple fact that they are interested in photography causes them to feel a more personal interest in our magazine than could well be the case were our magazine simply one of the large number devoted to the entertainment and instruction of general readers. This is attested daily by our heavy mail, the frequency with which we are sent lists of the names and addresses of possible subscribers, and by the kind words of appreciation that accompany almost every renewal of a subscription.

But, while all this is most gratifying, we would appreciate even more kindness along the same lines. Many of our subscribers seem to think that we do not wish to be bothered with their efforts at assistance; some even fail to recognize that they can be of assistance to us in a marked degree and with little or no expenditure of time or trouble on their part. In the matter of sending in names for sample copies, they do not realize that a half dozen names would not only cost us some money, if obtained in the regular way of advertising, but would, if obtained by advertising, involve our handling as many, if not more, names sent in by what are classed as "sample copy fiends," or people having no intention of subscribing, people who simply want to increase their supply of mail matter at the low cost of a postal card for each magazine. Only last week an old subscriber, and one that should have known better, sent in several names and addresses, and asked that sample copies be sent; adding, "If there be any charge for so doing, advise and I will remit the amount." Think of a reader holding any such idea as that when we are at all times anxious to get such lists. And then there is the reader who writes and asks us if such and such an advertiser makes such and such goods. He fails to realize that we are doing all we can to create just such inquiries for our advertisers, and our advertisers are anxious to get such inquiries direct from our readers. Last

week's mail brought a letter from a local firm enclosing another letter from a customer, and a reader of ours, asking for a copy of "The Photographic Quartet" mentioned in "Camera Craft." The booklet was mentioned in the advertisement of an Eastern firm who are anxious to get all the inquiries they possibly can for the booklet in return for what they pay us for the advertisement. And to cite one more case. Just recently a reader wrote, saying he was greatly interested in the possibilities of an optical lantern and a collection of slides; had found the work an interesting phase of photography; and had discovered that they could be made a welcome means of furnishing amusement and instruction to gatherings of all kinds in his home town. In fact, his work along that line was in great demand and the appreciation bestowed most gratifying. But he had never thought of writing us an article covering his experience and suggesting the same line of work for others. And so it goes. Each and every one of our readers can help. If you can do nothing more, you can at least write and tell us how you think the magazine can be improved. You can tell us what feature you like the best. What kind of articles appeal to you most strongly. We, of course, think we have a pretty good idea as to what the reader wants, but we do not know absolutely. And there is no way of knowing unless we hear from you. We want new subscribers, and the only way to get them is to have the names and addresses of possible subscribers. We want our readers to write our advertisers concerning the goods they manufacture and sell. While we do not wish to encourage the scribbling of a post card asking for price lists and circulars of goods the writer can have no interest in, we would call attention to the fact that there are very instructive booklets and catalogues put out by advertisers, and mentioned in their advertisements, that they are desirous of sending to possible customers. We want to know it if your town is a fairly large one and yet your local dealer does not carry a few of our magazines on his counter. Send us his name and address and we will be glad to try to interest him. We want you to write us something in the form of an article if you have any particular line of work that you find interesting and in which you have achieved gratifying results. It may be that there is nothing new in your whole method of procedure, but that does not matter. The other man likes to read about the course pursued by some fellow worker. And do not hesitate because you are not a practiced writer. All we want are the ideas, set down in an understandable manner. We will see that they are in good shape before going to the printer. We will send you a proof before using the article, if you wish. And if not a full article, an instructive paragraph is always welcome. And lastly, do not forget that the editor is always at your service. If you want help over a difficulty, if you want criticisms of your prints, if you want suggestions as to methods or means, drop us a letter of inquiry. You will receive prompt attention.

Art is not a thing to be done, but the best way of doing whatever needs to be done.—WARNER.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

CONTROL IN PRINTING.

The following letter, by Francis Sporza, to the "British Journal of Photography;" and, at a later date, favorably commented on by the editor, is along quite new lines and is well worth trying:

In a recent article published in the "Amateur Photographer," and partly reproduced by this journal, I described a method by which the contrasts in a photographic image on printing-out paper, could be altered within certain limits. The limited possibilities afforded by that method induced me to look for a more general process; for such a process that, with one and the same negative, and with one and the same brand of paper—of whatever description—one could obtain at will flat or hard prints or any intermediate gradation between those two extremes. I think success has crowned my researches.

I was led to the process hereafter described by a series of theoretical considerations, which I give here, as concisely as possible, in order to explain the principles on which my method is based.

(1) The printing properties of a photographic negative are due to a shading effect. According to the quantity of light that each point of the negative allows to pass, the underlying paper is more or less impressed.

(2) As a general rule, positive printing mediums are not orthochromatic. They are sensitive only to radiations of short length of wave. The less actinic rays of the spectrum, green, yellow, orange, red, and ruby, leave them unaffected.

(3) If we replace the grey-black silver deposit in the negative by a colored inactinic deposit—say, yellow—our toned negative will continue to preserve its shading properties, due to the presence of different thicknesses of a metallic compound; but that negative will have acquired a valuable latent property, that of elasticity.

(4) The effect of that change of color in the negative will be to make the time of printing longer than previously; one of the components of the active rays will be absorbed, partially or totally, by the yellow deposit, to which it is complementary in color.

(5) Nevertheless, when printing with that toned negative, the image will be built by light and shade, as in the ordinary course of things. But let us consider the case when we interpose a filter, complementary in color to the yellow negative image, between the source of light and the printing-frame. The only actinic ray that now can reach the negative will not act entirely on the paper, but in those portions where the glass is quite clear. As soon as a yellow deposit is found, color absorption occurs; and that color absorption added to the light and shade effect renders the plate extremely hard. Where the yellow deposit is very light, part of the light will reach the paper, but with increasing thickness the absorption grows steeply, and beyond a certain point the opacity of the negative to that monochromatic light is absolute. This, of course, when the tint and the depth of the filter are so calculated as to cut off all but one well determined colored radiation.

In order to control our prints we have therefore two means at our disposal:

(a) According to the quality of the negative and to the nature of the print that we desire to produce, we screen the negative, during all the time of printing, with a filter of lighter or deeper tint, i.e., transmitting more or less of white light.

(b) The filter is interposed during part only of the whole time of printing. In the first part the details are impressed, and in the other—with the screen—details almost cease to grow, while the deep portions of the print—the "nerves" of the image—are built. The results will

vary at infinity by varying either the time of exposure with and without the filter, or the tone and depth of that filter, or both.

Here are the working instructions for this process, as I have worked it out.

I substitute lead chromate (chrome yellow) for the silver in the negative. The plate is put in the bath, made up as follows, until thoroughly bleached:

I: Five per cent solution of lead acetate, to which is added one per cent of acetic acid ..... 1 part.

II: Five per cent solution of potassium ferricyanide 1 part.

The bleached plate is then carefully wiped over with a piece of wet cotton-wool, to secure perfect cleanliness of the film, and is well washed in abundant water; it is afterwards treated with a three per cent solution of nitric acid, again washed, and passed for a few minutes in a ten per cent (not more) hypo bath. After a good rinsing in different changes of water, the white lead ferricyanide is converted into yellow lead chromate by an immersion for from two to three minutes in a five per cent solution of potassium bichromate. A careful final washing is indispensable to free the film from any trace of bichromate.

The color of the filter to be used in conjunction with the plates thus toned must be indigo-blue, which color is nearest to the complementary of the yellow lead chromate. I suggest that it would be advisable to manufacture this filter in the shape of stained transparent paper or film, so that one or more thicknesses might be used, as required by each particular case, with a minimum of trouble.

In order to reduce the contrasts a yellow filter must be used, as near as possible in color to the tint of the yellow chromate image. It is obvious that it will not be possible to carry the depth of that filter beyond a certain point, or the image would become almost or quite unprintable. But, even when very light, that filter will increase in a notable measure the time of printing. A method to obtain flat prints, without yellow filter, or even with a light indigo-blue filter, is to use a paper specially sensitized for yellow.

FINE FOCUSSING SCREENS.

A method of making a focussing screen with an extremely fine grain is given in "Photo Notes," and, as some of our readers may have need of such a screen for critical work, we quote it. The first step is to take a dry plate of the size required and to fog it uniformly all over. Next, after fixing, the black fog is bleached in a solution of iodine, and the plate is then treated with ammonia, washed and dried. The fogging is best accomplished by immersing the unexposed plate in a developer and leaving it for a considerable time, as this gives a more uniform and finer deposit than is usually obtained if we attempt to produce fog by exposure.

Using an Ilford special rapid plate and an amidol developer, containing about four grains amidol to the ounce but no bromide, twenty minutes' immersion will produce sufficient fog for an ordinary screen. When fixed and well washed, the plate is immersed in a solution containing five grains of iodine and ten grains of potassium iodide to each ounce of water until it is bleached throughout. After this it is rinsed and put in a dish of water to which a few drops of strong ammonia have been added, and is left there until all iodine stain has vanished and a nearly white deposit is left. The plate is then washed and dried. A coat of celluloid or crystal varnish is advisable.

A screen prepared in this way, says our contemporary, is far superior to any ground-glass, as the finest detail is visible upon it, though it is not so transparent as to render focussing troublesome.

With regard to the preparation of the iodine bath, if the ingredients are put straight away into the full quantity of water, the iodine will take a long time to dissolve, and may not dissolve completely for some days. The two chemicals should be weighed out separately and then mixed together in the bottom of a dry measure. The iodide will immediately be discolored, and on the addition of just enough water to moisten the mass, the iodine flakes speedily dissolve and form a thick red fluid, which can then be diluted to the desired volume.—"Photography."

DUPLICATE NEGATIVES AND DIRECT POSITIVES.

Under these captions two writers, S. Balagny and a writer (G. S.), in the "Photo Revue," describe a process (*vide* "British Journal of Photography") that appears to be identical. That of G. Balagny, here given, I have tried; and, as applied to bromide paper, got good results, which, as it is the first time any of these indirect reversals has ever given me a clean image, makes me hopeful. G. S.'s modification seems to be solely in that, instead of backing with black paper, he keeps the plate immersed in water in a black pan during the printing of the second image. Mr. Balagny says:

If it be admitted that only small negatives will in future be taken and that therefore all large apparatus may be scrapped, the question of enlargements becomes the leading question of photography. The simplest method is to make a bromide enlargement of the desired size. This giving only one copy, the next is to retouch the copy and make a negative therefrom. Another plan consists in making a contact transparency from which an enlargement can be obtained in the camera. In both cases there is a double operation.

Two years ago the author brought before the congress of scientific societies a method of making duplicate negatives ("contretypes"), which could be completed within one hour's time.

The operations may be briefly recapitulated.

1. A positive is made on glass (or paper) in the camera.

2. After washing the second exposure is given—two to three minutes—less in certain cases.

3. Washing follows, then the first image is dissolved in a solution of bichromate or permanganate of potash, acidulated with sulphuric acid.

4. The plate is washed again thoroughly, and then the second image is developed: it will be the exact duplicate of the original negative.

In order to secure success it is requisite that the two functions shall be kept separate, viz.:

1. The first exposure and development.

2. The second exposure and development.

In order to prevent one exposure interfering with the other—the only difficulty of the process—the first image is made to serve as a screen, so that the unreduced parts are affected only by the second exposure; the first image is then got rid of by dissolution in permanganate, or better in the bichromate bath.

With this the second image is clear of the first; no difficulty in developing it should be met with when an energetic developer is used. In order to bring this method of duplicating into use for the purpose of enlarging, the author points out how to avoid the only difficulty which may present itself. It is the necessity of keeping the two images clear of one another.

In making the second exposure it is essential to protect from light the underlying parts of the film, from which our negative is obtained, from any contact of light through the back of the glass, as otherwise this will fog the shadows of the intended negative. This would produce a mixture of positive and negative images, which will eventually show itself by a sort of festooning of the outlines of the image. A print from the negative would show it in like manner.

To obviate this it is necessary to back the plate with an opaque backing during the second exposure. The author points out that attention has not been previously drawn to this fact, and describes his method. He moistens a piece of paper, lays it down on a plate of glass, squeegees it, and places the plate on it for exposure, holding the two firmly together. They are thus exposed in diffused light against a window for from one to five minutes, according to the intensity of the light, full exposure being necessary to success. It is necessary to add that the plate must be kept in a moist condition during these operations.

The plate is now washed in the darkroom, after which the first positive image is dissolved out in the bichromate or permanganate bath. If this method has been carefully followed there will be no merging of the two images. The first positive has disappeared. It will leave behind a small quantity of unaltered

bromide of silver, which, not having been affected by light, will not be reduced by the second development.

This will attack only the deposit which formed the shadows of the first image and are quite visible, being tinted by the bichromate or permanganate, so much so that, at the time, the character of the second image can be easily appreciated.

The author here puts the question: What is the nature of this second image, so clearly seen? Is it reduced silver? If so, how is it that it does not disappear with the first in the acid bath? It seems that the silver reduced by the light and that reduced by the developer are not the same; a question which remains to be solved.

The plate coming out of the acid bath is now thoroughly washed, and the second image is developed. Second developer:

Water	200 ccs.
Diamidophenol	1 gm.
Sulphite of soda (anhydrous)	6 gms.
Solution of bisulphite of soda	5 ccs.

The bisulphite serves to dissolve the traces of bichromate or permanganate which may remain in the image. The plate will develop slowly, since the acid bath will have diminished its sensitiveness, but in normal development and with a fresh developer a dense image is obtained in ten minutes.

Finally, the plate is washed and fixed, a necessary operation, because, as has been shown, traces of bromide of silver always remain.

These details of the process described previously in the "Bulletin de la Société Francaise de Photographie," of 1908, will prove useful in obtaining in the camera from a small negative another of any desired size.

With negatives so obtained artistic prints in carbon, gum, oils, etc., can be obtained as good as direct.

Finally, it may be mentioned that in this process we have not an inversion of the image. We develop a primary image, which we get rid of, and we put a second by the side of it on the same plate. The true inversion is obtained only by over-exposure.

An entirely different method of reproduction is given in a recent issue of "Apollo," which ascribes it to Eder. A thin film is sensitized in a four per cent solution of potassium bichromate and dried in the dark. It is then printed under the negative until all the details are visible, then washed for an hour, developed by any regular developer and finally fixed and washed.

A WHITE SAFE LIGHT.

The "Atelier des Photographer contains a statement by Stolze that ten years ago Liesegang gave a formula for a dark room light that is safe and yet seemingly white. It consists of a light filtered through a solution containing thirty grains of green nickel chloride and ten grains of red cobalt chloride in a litre of water. The resulting solution is light grey and filters out both the blue and violet rays.

TONING AN OCCASIONAL PRINT.

A friend of mine does considerable view work, doing all his printing, as a matter of course, on developing paper. But, at rare intervals he wants a print on printing-out paper for reproduction purposes. Most half-tone engravers find no difficulty in making good blocks from good developing paper prints, but occasionally one will fall back on the old excuse that the copy was not on a gelatine printing-out paper, when the block happens to be unsatisfactory. So, on the few occasions when a print is wanted for the engraver, he makes a gelatine chloride print. A large bath is expensive and inconvenient; therefore, he adopts the following plan: He keeps on hand a package of borax, and a gold solution, eight grains to the ounce. When a print is to be toned he puts two drachms of tepid water into a cup or graduate; in this dissolves what borax he can take up on the end of a penknife blade, and then adds a quarter of an ounce of the gold solution, or two grains of gold. The print is washed, laid on a sheet of glass, and the toning solution applied, evenly and rapidly, with a rubber bound brush kept exclusively for the purpose. This plan makes the toning of an occasional print a simple and economical process.

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

DECEPTIVE NEGATIVES.

Practically every camera user knows what a good negative looks like. Early in his career he learns that much, and quite often the knowledge leads him astray. He goes afield and makes a series of exposures, using every care, only to find when development is complete that one or more of the negatives are disappointing He has measured them all up by his standard of a good negative. This good negative, an image of which he holds in his mind as a standard, is one that has such a scale of gradation that a straight print shows a scale ranging from white paper to the blackest tone possible, with full detail throughout. It is a technically perfect negative. But, to make such a negative the requisite one for a correct portrayal of the scene before the camera, the scene itself must have such a scale of tones. It is a very easy matter to find a scene containing nothing approaching a black nearer than does a dirty gray. It is possible to find many scenes containing nothing lighter than a pronounced blue haze. Some very pleasing marine views have a range of tones that can be encompassed by a surprisingly short scale of gradation. A murky, dull, winter day, even in a city street where contrasts usually abound, may require but a range of two or three tones in order to produce the exact effect that the eye sees. True, brilliancy and an extended range of tones can be secured in some degree by shortening the exposure and using bromide or some other restrainer. The blue grays will come lighter and the green or yellow ones made darker, giving a longer scale and more nearly approaching this ideal good negative. But the scene itself has not been photographed as it appears to the eye. One of our own pet negatives looks like nothing more than a sadly overexposed and fogged result. But it makes a print that is about as satisfactory as anything we expect to make, and makes it on almost any kind of paper. It represents a number of men busy around a clambake, a mass of clams, sweet potatoes, green corn in the ear and other delicacies, all covering a bed of hot stones and coals, bedded in sea weeds and covered with the same, supplemented by a final covering of an old piece of sail canvas. The covering has just been removed and the steam and smoke envelopes the whole scene. The figures, even the near ones, are little more than ghosts. The scene is one that could not possibly be represented by what is generally understood as a perfect negative. And all this is simply to caution the worker that the fetish of the perfect negative is one that should not be too persistently worshiped. We should all strive for correct exposure and right development; we should avoid fog and stains and guard against dust spots and scratches. But, to try and make all our negatives, regardless of the subject, measure up to some certain standard of brilliancy and range of gradation is as futile as it is unsatisfactory.

ARE YOU GIVING MORE TIME?

Do not forget that the light gradually grows weaker from midsummer to midwinter. Increase your exposures accordingly. Do not tell your dealer that your favorite brand of plates or film is not as rapid as it was a while ago. Even with your exposures increased in due proportion to the diminution of the strength of the light, you may get the effect of under exposure a little later, just because you are doing your developing in a cold room with cold solutions. During the summer months the solutions and the atmosphere were warm, or at least not cold. You were securing the maximum efficiency in your chemical manipulations. Your negatives were satisfactory, let us assume. But suppose you were to have taken these

same plates into a cold storage plant and tried to have developed them with cold developer, you would have found you had the nicest batch of hopelessly under-exposed plates you ever made. A few years ago there was considerable in the magazines concerning the merits of a hot developer for under-exposed plates. No one questioned the efficiency of the plan, but the difficulty of avoiding danger to the film prevented its becoming a popular procedure. Someone should have suggested the use of a cold storage vault and iced solutions for cases of over-exposure. But there are other means of controlling over-exposures. Besides, we rarely discover a plate or film is badly over-exposed until we come to develop; while, on the other hand, conditions are sometimes such that it is necessary to give what we know are under-exposures, or forego making the desired exposures.

SOME FROST PICTURES.

There was an out-of-town amateur in to see me the other day, and of course he had to produce the inevitable bunch of prints from his inside coat pocket before we were through. They were all very good, but what interested me most were some pictures of frost-covered window panes; particularly as such subjects are practically unknown in California. They were very fine, and he explained that he intended to use the same class of subjects with a few holly branches at one side, by double printing, as the borders for some Christmas cards he was going to get out for his friends. This reminded me of some very pleasing effects another friend had produced a few years ago by dusting sprays of holly with flour and photographing them in connection with a neatly painted card carrying a Christmas greeting. And come to find out, these frosted window panes were just as deceptive. The frosting had been produced by putting one of several suitable photographic chemicals into a cup, adding just enough hot water to dissolve, and then applying it to the glass with a small wad of cotton wrapped in cheese cloth. It is dabbed on, beginning at the top and working in wavy horizontal lines from side to side until covered. In a few hours a beautiful crop of crystals results. Sodium sulphite, sodium carbonate, alum, hypo and a number of other chemicals, no doubt, all produce fine crystals varying according to the one used. A potted geranium, with a frosted effect showing a portion of the window sill and sash as a background, should make a good panel enclosing arrangement eminently suited to the bearing of a Christmas greeting. The California wild cherry, used throughout the State as a hedge plant, has a leaf so closely resembling holly that it could be substituted at this time when the real article is not yet generally available at the florists. Everyone who has ever made up their mind to produce some good Christmas card photographs, "this year, sure," will endorse my recommendation that an early start is advisable.

TO PREVENT PRINTS CURLING.

If they are immersed, after washing, in a mixture of one part alcohol, four parts water, and three parts glycerine, they will have little or no tendency to curl under the most trying conditions. A local professional adopts this plan, with the greatest of success, for pictures intended for display in his street case. There they are subjected to the dampness of night air alternated with sunlight during a portion of the day, yet remain almost perfectly flat. It might not be advisable to use this method in the case of prints that were wanted to have the maximum amount of permanency, as the glycerine acts mainly to keep the print damp at all times, a condition that is conducive to fading; or, at least, favorable to any inclination to fade which the print may have.

SOME HOME PORTRAITS.

Along with the prints that reach our desk every month for criticism, there are quite a number of home portraits. There are one or two faults so prevalent that a few words here may be worth while. The most pronounced fault, and the one the makers seem less inclined to see themselves, is the cut out and pasted on effect that the heads have been given. This is due to a number of causes. The lens generally used is either one that does not work at a very large opening or if it does, the worker stops it down until the

entire head is sharp. If the eyes are sharp, while the ear, that part of the hair that cuts against the background, or the cheek that does the same, is just diffused, not fuzzy, there will be an effect of roundness that will separate the head from whatever is behind. To get this effect, the lens must either work at a large aperture or else be of sufficient focal length to give but little depth at the distance at which the sitter is placed, when its largest stop is used. Another cause, and one often combined with the first, is the lighting being so done that there is no roundness at the sides of the face. The side in the light runs right out to the edge, without any gradation or shade to show roundness, while the shadow side is a duplicate, except that it is a flat expanse of dark. So treated, the head might be that of a sheet iron figure, painted to roughly resemble a human face. Combined with these two causes we often find the worker possessed of the idea that a background must be used, no matter what it is, just so it is something that can be hung behind the sitter. Quite often the wall itself would be better. The average room in our homes is rather small, as compared to the professional's skylight room, and instead of the window being a large one some distance from the end wall, our room, if large, will usually have two windows, both quite near their respective end walls. So the background is brought, by the conditions prevailing, quite near the sitter. What should be done is to try and find a room in which, when the sitter and camera are rightly placed for a plain lighting, there will be some three or four feet allowable between the sitter and the background. One reason, come to think of it, why the beginner brings the ground up so close, is because it covers more and there is less danger of its edge showing as he moves his camera about in order to get what he thinks is the best effect. But that should not be allowed to influence him if there is room to put the background further back. He should get everything to his satisfaction as far as the position of sitter and camera are concerned, and then move, or have moved, the background into the right position. And this is why his improvised ground should always be so arranged that it is easily movable. A temporary line, over which it can be hung, is arranged in but a moment's time if a couple of screw eyes and a piece of stout wire are used. Small screw eyes can be screwed into the side of window and door casings, and in picture mouldings, without defacing them in the least; and, if the possible locations are too high, stretch the wire just the same and suspend the background below by means of other short pieces of wire running down to each end of a thin stick or fish-pole over which the ground is hung. If these few suggestions are heeded, much of the work turned out would be so greatly improved that there would be little left to criticize.

PITTING OF FILMS.

An Oregon correspondent has sent me a piece of a negative well peppered with little pits that are almost transparent but with a black speck in the center of nearly every one. These are not at all the fault of the plate, although it might happen that certain plates, or even certain runs of one particular brand of plates, might be more inclined to pit than others, owing to the difference in the gelatine used for different emulsions, but this only to a very slight degree, if at all. There is no cure, once the pits have made their appearance. They are caused by decomposition of the gelatine; as a rule, due to slow drying in warm, "muggy" weather. They can also be caused by the evolution of gas in the film, gas produced by the decomposition of chemicals used in developing or fixing. To prevent them, wash the plates as rapidly as possible and dry them quickly. A good draft of air, or the use of an electric fan, will facilitate the last. The former can be achieved most quickly perhaps by the method of soaking and changing the water, six soakings of three or four minutes each, with a complete change of water between, will wash ordinary, single coated plates, sufficiently; providing the water is not unusually cold and the fixing bath has not had too much of a hardening effect. A fresh hypo bath is also advisable, as an old one tends to facilitate the decomposition of the gelatine.

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3¼x4¼ and 5x7, developing paper, of natural history and mountains; for the same or general views in post cards or stereos. Class 1.

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3¼x5½, developing paper, of Japanese, Chinese, Korean and Hawaiian views and natives; for types and occupations of various foreign nationalities in unmounted prints. Class 1.

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2578—C. R. Lane, Startup, Wash.
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2579—Clarence A. Pike, R. F. D. No. 4, Montpelier, Vt.
3¼x5½, 5x7 and 6½x8½, various papers, of views of all kinds; for views, buildings and groups. Class 1.

2580—George Bolinger, Box K, Vanderbilt, Mich.
2¼x3¼ and 4x5, developing paper, of landscapes, building and lumbering views; for landscapes and any other interesting subjects in post cards and pictures 2x3 and 3x4 on post cards. Class 1.

2581—Rev. Oscar L. Joseph, Lafayette Ave., Suffern, N. Y.
3¼x4¼, various papers, of scenery with figures; for scenery, buildings, etc., in post cards only. Class 1.

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3¼x5½, developing paper, of general views, no portraits. Western life and scenery, etc.; for general views of similar ideas, and views of educational interest. Class 1.

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2588—C. Lyle Demorest, 926 W. Washtenaw St., Lansing, Mich.
3¼x5½, developing paper, of amateur work, landscapes and am interested in child portraiture; for post cards or prints of same size of general scenic or artistic interest. Class 1.

2589—James R. Heaton, Box 194, R. F. D. No. 3, Hood River, Ore.
4x5, developing paper, of scenery, landscapes, views, rivers, etc.; for post cards of any interesting subject, landscapes preferred. Class 1.

2590—Mary Louise Perry, 44 Couch St., Plattsburg, N. Y.
3¼x4½, developing papers, of mostly outdoor work; for the same. Class 1.

2591—Thos. Mandy, U. S. S. "Maryland," care Postmaster, San Francisco, Cal.
3¼x4¼, developing paper, of naval views; for any subject. Class 1.

2592—August A. Seifert, Box 42, Lauraville, Md.
3¼x5½, developing paper, for landscapes and scenery of all kinds such as falls, dams, streams, etc. Post cards only. Class 1.

RENEWALS.

344—J. E. Whitemore, Box 371, Scranton, Iowa.
Class 3.

1756—George W. Given, 2771 Pratt St., Bridesburg, Philadelphia, Pa.
4x5 and 5x7, developing paper, of landscapes; for the same. Class 1.

1771—Burton H. Allbee, 103 Union St., Hackensack, N. J. (Was 140 State St.).
Post cards and prints, 5x7, 4x5, 3¼x5½ and 2½x4¼, developing paper, of historic sites and buildings and sites preferred. Will answer all exchanges but owing to press of business possibly not immediately. Class 1.

1777X—Percy D. Booth, Box 17, Wellsboro, Ind.
4x5 and post cards, various papers, of flowers and subjects in full light and dark or shadowy foregrounds in post cards only. Class 1.

1997X—Mrs. Alice A. Wiltse, Redvers, Sask., Canada.
Post cards. Class 1.

2002X—A. J. Newman, 3315 North 26th St., Tacoma, Wash.
5x7, various papers, of prairie and lake views; for post cards sent in envelopes or 5x7 unmounted prints. Class 1.

2092X—Robert Greethurst, Peterson, Minn. (Was Lewiston, Minn.)
Up to 6½x8½, various papers, of typical landscapes, flower studies, and mountain views; for the same in post cards only. Good work for good work. I wish a large exchange. Class 1.

2095—Gustav G. Stortz, 2424 Germantown Ave., Philadelphia, Pa.
3¼x5½, developing paper, of landscapes, historical buildings, etc.; for landscapes, seascapes, swimming and boating scenes, etc. Class 1.

2123—J. B. Oheim, Box M, Henrietta, Texas.
2¼x3¼ to 5x7, of landscapes, groups, flowers, and art panels; for the same, the first exchange to be post cards. Will correspond in English or German. Class 1.

2127X—Chas. T. Sansberry, Anderson, Ind.
Class 2.

2143—A. M. Raney, Madisonville, Texas.
Post cards only, of local views, groups, etc.; for the same. Class 1.

2144X—W. M. Horton, Alvord, Texas.
Cannot exchange at present account business being too heavy, will pay up all due exchanges and insert exchange notice later.

2215X—S. S. Webb, 805 East Market St., Warren, Ohio.
Post cards only. Good work for good work. Class 1.

2523—Mrs. Blamey Stevens, Valdez, Alaska.
Changes from Class 1 to Class 2.

2531—J. Elliot Patterson, 247 Second St., Ashland, Ore.
Changes from Class 1 to Class 2, wishes to receive prints only.

CHANGES OF ADDRESS.

1875X—J. B. Shelton, Ingleside, Neb.
(Was Jamestown, N. Dak.)

2018X—William Douglas, Snohomish, Wash.
(Was North Bend, Ore.)

2069—F. H. Schultz, Ypsilanti, N. Dak.)
(Was Des Moines, Iowa.)

2240—John Dore, 626 East Cornwall St., Philadelphia, Pa.
(Was 3136 Custer St.)

2276—J. Frank Felter, Eureka, Ill.
(Was Champaign, Ill.)

2294—Hans Simons, Route 3, Flandreau, S. Dak.
(Was Manderson, S. Dak.)

2295X—Irvin G. Dillon, Whiteagle, Okla.
(Was Kyle, S. Dak.) Will be glad to repay any cards that may have been lost, if members will notify him.

2301—Kenneth B. Norton, 898 Bryden Road, Columbus, Ohio.
(Was Osceola Mills, Pa.)

2361—Eugene Clifford, Weippe, Idaho.
(Was Pierce, Idaho.)

2374X—O P. Lynum, 612 Lakeview Ave., Seattle, Wash.
(Was 521 W. Heron St., Aberdeen, Wash.)

2402—F. C. Hollopeter, Shelton, Neb.
(Was Fremont, Neb.)

2416—E. Bahr, 15922 Park Ave., Flat 3, Harvey, Ill.
(Was Vinton, Iowa.)

2437—F. T. Negley, Jesup, Iowa.
(Was Cedar Falls, Iowa.)

2484—John H. Vale, 215 McPhee Building, Denver, Colo.
(Was 609 East First Ave., Denver, Colo.)

1864—A. G. Lindgren, Ellsworth, Minn.
(Was Hasty, Minn.)

1888—Edw. J. Perkins, care Band 22nd Infantry, Fort Sam Houston, via San Antonio, Texas.
(Was General Delivery, San Antonio, Tex.)

1897X—Hubert C. Mohr, 2029 E. 40th St., Cleveland, Ohio.
(Was De Graff, Ohio.)

1937—J. N. Harrison, South Framingham, Mass.
(Was New London, Conn.)

1958X—Chas. T. G. Smith, Benicia, Cal.
(Was Sacramento, Cal.)

2202—H. H. Wiles, Rouse, Colo.
(Was Chicosa, Colo.)

2294—Hans Simons, Kyle, S. Dak.
(Was Flandreau, S. Dak.)

2301—Kenneth B. Norton, 898 Bryden Road, Columbus, Ohio.
(Was Osceola Mills, Pa.)

2326—J. Bernard Tighe, care The Madera Co., Ltd., Madera, Chihuahua, Mexico.
(Was Douglas, Ariz.)

2410—S. C. Dalton, Waterville, Wash.
(Was Granada, Minn.)

2451—C. H. Holcomb, San Pedro, Chiapas, F. C. Pan-Americano, Mexico.
(Was Tonala, Chiapas, Mexico.)

2475—E. C. Kenney, R. F. D., Castile, N. Y.
(Was Perry, N. Y.)

2536—R. Le Fevre, Box 125, Carlinville, Ill.
(Was Eagle, Alaska or Gateway, B. C., Canada.)

WITHDRAWALS.

2464—Mark A. Getty, Lakeview, Ore.
On account of lack of time.

Our Book Shelves

"LANDSCAPE AND FIGURE COMPOSITION."

As a rule, such advice as we get on the vital subject of composition, is either from a photographer who has little conception of the real, underlying, basic principles of composition; or, what is nearly as bad, from a competent writer on art subjects who has little or no knowledge of the characteristic limitations of photography. We can, therefore, congratulate ourselves upon finding available a new work with the above title, a book written by Sadakichi (Sidney Allan), a gentleman whose reputation as an art writer and critic has stood the test of time and whose achievements with the camera have shown his knowledge of its capabilities. His theory is sound and practical, his instruction helpful and reliable, and both are based on long study and much experience. The book is a large 8vo., containing one hundred and twenty-eight illustrations. The topics treated may best be indicated by giving a few titles of chapters as follows: Geometrical Forms of Composition, Line Combinations, The Placing of Figures, Background Arrangements, Foreground, Middle Distance and Distance, One-Figure Composition, Two-Figure Composition, and others. The price is three dollars net. Published by The Photographic Times Publishing Association, 135 West Fourteenth Street, New York.

"HANDBUCH DER STEREOSKOPIE."

The above is the title of the new volume, number thirteen, of Liesegang's Photographischer Bucherschatz, published by Ed. Liesegangs Verlag, M. Eger, Langastr. 5, Leipzig, Germany. The author of this volume, Otto Schilling, is certainly well informed concerning stereoscopic work and has written a book that should appeal strongly to all photographers who are capable of reading German. The book contains over one hundred pages and has some sixty illustrations, including five stereoscopic reproductions. The price is M.2,50 in paper covers, M.3,00 cloth, postpaid.

A NEW "POPULAR EDITION."

The American Photographic Text Book Company announce a new edition of their "Self Instruction Library of Practical Photography." This has been revised and enlarged to ten volumes.. The reception given this library, since the first edition came from the press, clearly demonstrates that, next to the camera and lens, a set of this standard photographic reference work is probably the most necessary feature of the present day photographic workers' equipment. The publication of the "Popular Edition" will render the possession of a set possible to every one, on account of its unprecedentedly low price and the liberal selling terms. This edition is to be bound in three-quarter leather.

It might be mentioned that more than two hundred leading professional as well as amateur photographers, together with experienced demonstrators for the various photographic manufacturers, have supplied their experience. The Library, in other words, is not a one-man proposition. It contains vital information for beginner, advanced amateur and professional. Experts give the benefit of their experience on every subject. These books clear up all the difficulties that confront the photographic worker; reveal secrets of how the best photographers work; give many new and valuable formulae; save time, money and worry in every branch of the work. It is desired that the new edition be widely distributed before January 1st, in order to use them as references, and special reduced prices and easy monthly payments will be allowed on first sets. With each set of the books is given one year's free criticism and advice from the American School of Art and Photography. See their advertisement on another page and write for new prospectus.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

THE JURY IN THE KODAK ADVERTISING COMPETITION.

Too late for our last issue we were advised that the jury of award for the Kodak Advertising Competition, which closes October first, will consist of the following: Robert Frothingham, advertising manager of "Everybody's Magazine" and "The Butterick Trio;" George H. Hazen, advertising director of "Century Magazine;" Walter R. Hine, vice-president and general manager of Frank Seaman, Incorporated; F. R. Barrows, ex-president of the Photographers' Association of America; George H. Harris, of Harris & Ewing, president of the Photographers' Association of America. The Kodak people are to be congratulated upon securing such a competent set of jurors, and the competitors for the handsome prizes can be congratulated as well.

THE NEW COOKE CATALOGUE.

We have just received a copy of the new catalogue of Cooke lenses and are glad of the opportunity to review it in our magazine at this early date. There are so many kinds and sizes of lenses now on the market, that the makers of this catalogue have tried to simplify this new edition as much as possible. On every page is a headline stating what kind of photography each lens is meant for, together with a concise statement of the reason why the recommendation is made. Announcement is made for the first time of the new Cooke Primoplane lenses for wide angle pictures. Further details are given of the Series VI Portrait lenses, which have been so remarkably successful with professional photographers, while the extension lenses are now listed for nearly all series of Cooke anastigmats. On other pages one is told how to test lenses, and why people misunderstand the term depth of focus. They have also tried to state just how anastigmats differ from ordinary rectilinear lenses, making this catalogue a more than ordinarily informative one and one we can advise all our readers to secure. A post card will bring a copy. Address, The Taylor-Hobson Company, 1135 Broadway, New York.

A GRATIFYING REPORT.

A recent letter from Mr. Hamilton, of the J. M. Hamilton Camera Company, Waterloo, Iowa, contains a report such as we are always pleased to have. Despite the fact that his city is not one of the large trade centers and their firm not an old established one, business has grown to most gratifying proportions. The business is, primarily, a mail order one, covering cameras and photographic supplies. All makes of cameras have been sold and pleased and satisfied customers secured in exactly thirty States, not mentioning a few orders that have been shipped abroad. While the next few months, Mr. Hamilton writes, will hardly show an increase, on account of the winter months coming on, he wants his advertisement continued and expects to do a largely increased business, starting early next spring. See their advertisement on another page and write them should you be wanting advice and fair treatment in the purchase of a new camera.

AN INCREASED BUSINESS.

The C. P. Goerz American Optical Company report a very satisfactory and encouraging sale of their high-grade anastigmat lenses and cameras. The volume of business handled by them this summer far exceeds that of the same period in the past few years and they look forward to a corresponding heavy demand for their goods during the coming fall and winter months. Notwithstanding the increased volume of business the firm has arranged that all of their employees receive the customary vacation with full pay, because the management feels that all the employees, the clerical as well as the factory staff, all who have

helped to a successful result, should have a chance for enjoyment and recreation. At the present time the optical department is away, and upon the return of this force the mechanical department will lay their tools aside to sojourn to green hills and shady nooks or to the seashore, wherever their inclination draws them. Between times the clerical and supervising staff will run off on a hunt for recreation as it, of course, will not be possible to close the office for any length of time.

CENTURY SEPIA PENCIL.

For some time there has been a demand among professional photographers for a sepia spotting pencil, and heretofore there has been nothing on the market that would supply this want. The Century people have just introduced the Century Sepia Spotting Pencil, which is exactly what has been required along this line. These pencils may be obtained from dealers at ten cents each, or one dollar twenty cents per dozen. Do not fail to get one and try it on your sepia prints.

ANOTHER "AGFA" BOOK.

The Berlin Aniline Works expects to put out another book very shortly, which will be called the "Agfa Book of Photography by Flashlight." This will be similar to the "Agfa Formula Book," which has attained such a great popularity. The new book will be forwarded upon receipt of the label from a package of Blitzlicht powder and ten cents in stamps. One of these labels and the requisite ten cents will put your name on the list for a copy as soon as published. Send to the Berlin Aniline Works, 213-215 Water Street, New York.

CATALOGUE NO. 12.

This is the caption of a very compact and complete catalogue that has just been gotten out to commemorate the twelfth year in business of our good friend, J. L. Lewis. There are a number of fine products listed, products which are found only in this catalogue, Mr. Lewis having the sole selling rights in this country. These include the Seltona papers and Barnet plates, films and bromide papers. Our readers will find Mr. Lewis always ready to give their wants the best attention possible and they are assured the most prompt and considerate attention. A copy of this new catalogue will be gladly sent upon request. Address J. L. Lewis, 379 Sixth Avenue, New York.

LUXO STILL BETTER.

A recent improvement in the quality of one of the ingredients used in the manufacture of Luxo flash powder, an improvement made by the manufacturer of the particular chemical, permits the maker of Luxo to so compound that popular flash powder that its speed and actinicity are both greatly enhanced. We have seen some examples of work done with the new Luxo that make out a strong case for the increased efficiency of the improved powder. The new product has been put out by the Luxo Company for only a few weeks, the makers not wishing to place it on the market until fully satisfied as to its perfect keeping quality. We would advise an early trial. If your dealer should not happen to stock Luxo, write directly to the makers, the Luxo Company, 2111 Hunting Park Avenue, Philadelphia, Pennsylvania.

FLY SPECKS ON PRINTS.

A correspondent writes to ask how he can remove some old and almost unremovable fly specks from some prints that he values quite highly. The prints are mounted and some sort of local treatment is therefore most desirable. About all we can advise is some good castile soap in an alcoholic solution. Both the soap and the alcohol will tend to soften the specks, and the presence of the alcohol will harden the film on the print just enough so that there will be no ill effect from the alkali contained in the soap.

REMOVING PYRO STAINS FROM THE HANDS.

All that is required is a strong solution of chloride of lime and a good sized crystal of citric acid. Apply first the chloride of lime solution and then rub the stains with the crystal of citric acid, continuing to alternate the two until the stains are removed. Finally rinse the hands well in tepid water; and, if the skin is inclined to be dry, apply a little vaseline or cold cream.

ARTISTIC MOUNTINGS.

We are in receipt of a sample line of art mounting papers and boards from the Photo Crafts Shops of Racine, Wisconsin, consisting of over one hundred samples of papers and boards suitable for art mounting purposes and sensitizing. Mr. Bodine, the keeper of the Shops, has succeeded in filling a long felt want for the amateur photographer who does pictorial work. Prices on these mountings are very reasonable and the line is so varied that even the most critical will have no difficulty in selecting papers that will harmonize with any print or prints that they may have. The line of papers for sensitizing comprises deckle and plain edged papers in all weights, in whites, beautiful shades of cream, and in all surfaces imaginable. Those who sensitize their own papers for printing should not fail to get a sample set of these papers. A complete set of samples will be sent to any interested party by H. Oliver Bodine, keeper of the Photo Crafts Shops, Racine, Wisconsin, upon receipt of request and five cents in stamps to help pay postage and packing.

THE NATIONAL FORESTS.

I think there is scarcely a person who lives in Oregon, Washington, Idaho, Montana or California who has not been aroused to the necessity for greater vigilance in the matter of forest fire protection and prevention, especially in the national forests.

At Spokane, Washington, on August fourth, at the Semi-Annual Meeting of the Western Pine Manufacturers' Association, George M. Cornwall, editor "The Timberman," introduced the following resolution, which was adopted with a view of enlisting the national government in the successful fighting and prevention of forest fires in the national forests, which have been doing heavy damage in Idaho and Montana, and a lesser damage in Washington, Oregon and California:

Whereas, There exists a grave menace to the timber in the national forests on account of fire, carrying with it great and irreparable damage to life and property; and,

Whereas, There are stationed in different posts in the United States regular government troops who could be advantageously utilized in fire protection and extinguishment; now, therefore be it

Resolved, That it is the sense of this meeting that a communication be addressed to the President of the United States as commander-in-chief of the army, asking that troops located in the different States be regularly instructed in the methods of forest fire fighting and patrol; and be it further

Resolved, That said troops be placed under the direction of the Department of the Interior or other appropriate department of the government, and assigned for patrol duty during the months of May, June, July, August and September of each year, to the end that the timber resources of the United States be more carefully conserved.

The resolution was heartily indorsed and telegrams were sent by the association to President Taft and Henry S. Graves, chief forester, and also by President Flewelling of the Western Forestry and Conservation Association. President directed the Secretary of War to lend the assistance of troops wherever available in combatting fire. The troops have done effective service. With training and preparation their efficiency would be increased.

The government should make it a policy to maintain a corps of soldiers in the States of Oregon, Washington, Idaho, Montana and California in the national forests during the months of May, June, July, August and September to co-operate with the forest service in patrol and fire fighting duties.—"Portland Journal."

FEDERATION OF WOMEN PHOTOGRAPHERS.

The Women's Federation needs, as members, every woman photographer. Every woman photographer needs, vitally, the Women's Federation. By giving little you will gain much; a little time, a little work, a little money, is all the investment needed. Last year we could only hope and promise; now we know that the Federation can help women to gain and maintain their proper place in the business and professional world. That the facilities afforded by the Federation can and will raise the standard of its members' pictorial productions. The associations and friendships formed, the interchange of ideas among the members, are

helps of a value not easily calculated. The knowledge gained by the individual member from a comparison of her work with that done by other women is a spur and incentive all through the year. The interchange of prints among members is another important and valuable opportunity for comparison and criticism; and, the nearly three hundred prints shown at Milwaukee proved what some believed, but none knew, that is, that the best of our work was equal in artistic conception, technical handling, and competent execution, to any shown.

Our plans for 1911 are more ambitious than ever: Twice as many members; twice as large an exhibit; and, twice as good. To achieve this we must have the earnest help of every member. All who know women who are eligible as members, but are not members, must urge them to join. Explain to them the scope and advantages of the Federation and send their names to your officers so that they may be officially urged. If you are a member of the circle, forward your print promptly to the next member; if you do not, you will be fined, as you will see by the slip attached to the print.

Finally, remember that but little was expected of us in 1910, and that we so far exceeded these expectations and our own fondest hopes that much will be expected of us next year. BELLE JCHNSON.

Vice-President Federation of Women Photographers.

A HANDSOME SOUVENIR.

H. I. Jones & Son, Limited, Wanganui, New Zealand, have favored us with a copy of their "Jubilee Souvenir," an album of handsome photographic reproductions, gotten out to commemorate the fiftieth anniversary of the founding of the firm. Most interesting is a view of Wanganui, taken in 1864, particularly when compared with the views taken recently for this souvenir. Another interesting comparison is that between the original small shop on Taupo Quay and the large, handsome building now occupied as a shop and warehouse, near the General Postoffice, on Victoria Avenue. The regularity with which this enterprising firm increases its order for "Camera Craft" has long led us to feel its growing importance; yet this handsome publication comes as a most gratifying confirmation of belief.

A PROFITABLE SIDE LINE.

One of the most profitable side lines for the portrait or commercial photographer is bromide enlarging, and today the trade in general is taking up this work to an extent not dreamed of a few years ago. The rapid growth of the business has developed a need for specialists; and the development of the specialist has demonstrated that he can do this work cheaper and better than the workman who makes only an occasional enlargement. The quality of an enlargement depends almost entirely upon absolutely correct exposure; and the ability to get the correct exposure comes only through the constant practice and experience of the operator. The expert, working all day, and every day, under a constant light, will make a better enlargement the first trial than the less experienced man will make after several trials, and without the latter's consequent loss of time and material. Again, in the specialist's plant the operator works with an equipment and with time-saving arrangements that are not possible with the small plant; and, in connection with his greater skill and certainty of correct exposure, his speed from constant practice, and his small waste, enable the specialist to produce and sell enlargements at a price that is lower than the actual cost of production in the average studio or workroom, when a carefully kept account of time and material is considered. Many plants already equipped for enlarging have discovered this fact and more are every day learning that it pays them to send their enlargements to a specialist, on the score of both economy and better quality of work. A leading firm in this line is the Photo Craft Shop of San Francisco. They make a specialty of high-class work. They also print, by an ingenious automatic machine, post cards that are perfect and uniform, perfectly flat and free from inclination to curl, at prices that make the production of local view cards simply a matter of placing them with your local dealers. Their advertisement appears on another page of this issue, and their price list should be in the hands of every photographer. A postal will secure it for you.

Vol. XVII No. 11 NOVEMBER, 1910 Price, 10 Ce

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Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, NOVEMBER, 1910. No. 11

Photographing Children

By May Baker Mann

Our Prize Article for November, Winning a Wold Air Brush

ONE OF THE SEVEN EXPOSURES.

PERHAPS no other phase of the photographer's work is so fascinating and yet so difficult as photographing children; not merely placing the child before the camera and making an exposure on it (although, as every photographer of experience knows, even that is sometimes almost a science), but obtaining the best possible expression, one that will make the pictures merit the approval of the fond parents.

There is the timid child, the overbold, the child who will not smile, as well as the one who smiles too much; each must be handled so as to secure the one result, the true expression. Personally, I have tried many methods and have found that each and all can be summed up in one phrase: Secure the friendship, I might say comradeship, of the child. Whether I first meet the child in the reception room or the operating room, my efforts are put forth to gain that result. When it is in the reception room, I always greet him with a smile and speak a few pleasant words about something I think he will be interested in; and then, for the time being, seemingly pay him little attention. By the time I have concluded the necessary business arrangements, and at this time I make them as brief as possible, for my real order comes in when those irresistible proofs are shown, Charlie has

had an opportunity to study me; and, nine cases out of ten, he is ready to respond to my next advance. I would add here that we always insist on their coming to see the proofs, for it is not justice to us to allow the proofs to go out before they have been talked over with us and we have been given an opportunity to call attention to their good points.

Should I not meet him until he enters the operating room, as is sometimes the case, I pursue somewhat the same tactics, but rather more vigorously. If possible, I gain some idea of what interests or amuses him and talk to him about it, encouraging him to talk to me. If there is nothing around him in which he shows an interest, I begin talking about some toy I have "back on my toy shelf," and try to arouse his interest in that. Just now a horn whistle is my most priceless possession. If he expresses a desire to see my most cherished toy, I get it, and we have a nice time playing with it for a few moments. By this time we are chums. He no longer regards me as a "grown up," but the child's level has been reached, his confidence gained, and he has established me in the free masonry of childhood. Then, when I suggest that, "if he will come over here I've something else to show him," he comes willingly, joyously, and with very little trouble I have secured a charming pose and life-like expression.

Should I find, on first speaking to the child, that it is very shy and dislikes to be noticed by strangers, my task to win its confidence is much more difficult. Sometimes I have found it best to appear to ignore the child, showing all of my "pretty things" to the mother or nurse, letting the child make the first advances. Presently, curiosity gets too strong for timidity and a little hand is extended for some coveted article, which I immediately bestow. Soon we two are friends and the picture we wish is obtained; for, when a child gives you its confidence, you can do with it almost anything you wish.

I allow as few people as I can in the operating room. There are times when it is best, in fact, the only way, to have the mother step behind a screen and leave the child entirely to me. If one thing fails to amuse and attract, there is something else just at hand that will. Never say fail. If your patience is large enough and your ingenuity fertile enough, success is sure to come. Tears one moment mean nothing, for the next moment smiles may chase those same tears away, and you may succeed beyond your fondest ambition. I prefer to get the picture before the tears come; but because the child cries is no reason I have failed. Many a time I have secured a picture that the mother, and aunts, and cousins voted "just darling," after the shower had passed over.

Perhaps I can best explain my method of working by relating a little incident that occurred but recently. A lady came into the studio, accompanied by her little son, a bright little fellow of some four years. Leland, the boy, is one of those sensitive, highly organized natures. The mother told me that she was almost in despair over trying to secure a picture of the child, for she had tried, time and again, to get some kind of a picture, but had always failed. He was inclined to tears at the least provocation and so they had never succeeded in getting anything in the way of a picture, even of the poorest kind.

SHOWING THE STUDIO WHEN PICTURES WERE TAKEN.

The child was dressed in a little suit of storm clothes, hat, overcoat and leggins. I began by talking about how nice they were and how well they looked. He loved that little suit, and what child does not love such an outfit? Then I told him of my wonderful whistle. He wanted to see it and I brought it forth, and such a time as we had blowing it for a few moments! By this time Leland was standing in a large chair (unfortunately my light is too high to work very satisfactorily with a child on the floor), and the first position was made, the precious whistle clasped tightly

THREE OF THE SEVEN PICTURES MADE.

in his hand. Then his dog Carlo was persuaded to join us, and a picture of the two playmates was secured. By this time Leland and I were quite chums and the large head was attempted, with the result shown. A picture with his "soul looking out of his eyes," as his grandmother expressed it. Next, the picture of him and his train was made. In this the stand was lowered to within eighteen inches of the floor. In the pictures in which he is standing on the floor, the stand was lowered to within twenty-five inches of the floor. As can be seen, there are no two pictures of the same position. There were seven plates made, any one of which will finish well; in fact, we are planning to use all of them in a combination picture. To have all of the plates good is rather exceptional, but I average five good negatives out of seven exposures. I have found groups of children more difficult than those of a single child; but, if the mother does not insist on seeing each little darling's eyes, a picture book containing new pictures,

THREE MORE, COMPLETING THE SEVEN.

supplied after the focusing and all is complete, will generally result in a charming group and enable one to get what is wanted. That failing, a game of dominoes gives an excuse for an easy grouping. To be successful in this kind of work, one must study it incessantly; in pictures as well as in real life. One must be able to see at once the pleasing grouping of the little ones. If a position or group that you are trying to make seems difficult for them to take, do not try to force it upon them, but abandon it for one they can more easily assume. A child's patience is too frail to be unnecessarily tried. They are always ready for change and dislike prolonged effort. Several little girls may be placed around a little tea table, with tea-set and dollies and a life-like picture obtained.

So far I have been speaking of the tractable child, but there are times when one gets children with whom no ordinary means will suffice; and, as our bread and butter depend upon our being able to "grind all of the grist that comes to our mill," it is necessary for us to be willing, sometimes, to

CHILD STUDIES. By MAY BAKER MANN.

make a "holy show" of ourselves to accomplish this. It is quite often these most difficult subjects that pay best. Sometimes, when there is a group with a baby in it, a baby that not even a circus or a brass band would attract, just light a piece of paper and see how intently baby will look at it; and presto, you have your group at once. This I use only as a last resort; but it is better than losing a picture, and thereby an order.

As to arrangement of light; throw the curtains wide open. A child's face is so delicately rounded that all shading is made unnecessary. Then, too, it is usually dressed in light-colored or white clothing. As to equipment; use the best lens you can afford. It should not only be rapid, but should have good depth of focus.

If one is fortunate enough to have a light that comes well down toward the floor, the stand that lowers within eighteen inches of the floor is the best to use. But if one does not have such a light, the next best thing is to have a platform, one and one-half or two feet high, and as large as room permits, under the light in the operating room. It should be at least

4x6 feet, should be fitted with first-class castors, and I like mine covered with white oilcloth. It is then ready for white background work, and there is, in my opinion, nothing daintier for children. By the addition of a rug or spread, it is at once ready to use with the darker grounds.

Then one needs some small white chairs and stools for the white backgrounds; and a set of the Mission furniture, table and chairs, for the darker grounds. Very little else in the way of furniture is needed. As to toys; I think you will find whatever you may have will come in good place. Especially in making white background work, I have found it very profitable to make several negatives, each of a slightly different position, and unless I am sure the child has moved I never make two negatives of the same position. Then, when I show the proofs, I suggest how very charming these would be, made up in either a long or oval combination, arranging the proofs to carry out the idea. The result, in nine cases out of ten, almost ninety-nine out of a hundred, is an order for one or two combinations in addition to the original order. Remember, the size of the possible order is limited only by the condition of the customer's pocketbook. Again, if among the negatives is one that would make a good 11x14 or 14x17 enlargement, I call the customer's attention to the matter. I never try to sell pictures from poor negatives, preferring to make re-sittings rather than do so.

One of the most profitable assets around a studio is a baby book. Secure the name, address, age, and birthday of every baby subject; and, just before his birthday send a letter saying that he will soon be one, two, or three years old, as the case may be, and suggest that he should have a new photograph to celebrate the event. If you have never tried it, you will be surprised at the number of sittings these reminders will bring.

Last, but not least, ask for your work all you think your trade can afford to pay. Do not fail to value your own work and be sure to make the work equal to the value you place upon it.

What Is Art

"A work of art is more powerfully effective in proportion as it more strongly excites our imaginative faculties to creative cooperation."—Max Nordau.

"One of the first truths of art has needed to be rediscovered in these times, though it has been put into practice by every great artist . . . . that art must never be a statement, always an evocation!"—A. Symons.

"Nothing makes the soul so pure, so religious, as the endeavor to create something perfect; for God is perfection, and whoever strives for it, strives for something that is Godlike. True painting is only an image of God's perfection,—a shadow of the pencil with which he paints, a melody, a striving after harmony."—Michael Angelo.

Photographing an Aeroplane

By R. Prosser, I. P. A. 2112

With Illustrations by the Author

I have never written anything for a photographic magazine, and perhaps I ought not to do so now; but a record of my experience may help some brother amateur in distress; and, I was certainly quite dubious before photographing my first aeroplane.

Well, for the story: Two weeks before the date of the local fair, I figured on going over some afternoon to try and photograph something I had never even seen, an aeroplane. I looked through all my photographic

"I WAITED UNTIL IT WAS ABOUT ONE HUNDRED FEET FROM ME."

magazines for the last four years, but found only one short paragraph on the subject. Condensed, it said: At midday use stop f-11, and give one eight hundredth of a second exposure. That did not help me much, although I figured on quick exposures on account of the speed of the aeroplane. As for the time of day, if the flight was made before three-thirty p. m. or after six p. m., I could not get my pictures, as my train connections only allowed me the intervening two hours and thirty minutes. I had a 4x5 Hall Reflex camera fitted with a Turner-Reich lens of seven and one-half inch focus, and three plate holders; the first two loaded with Cramer Crown plates and the third with Hammer's Red Label. I intended to get a film pack adapter and a film pack when I reached the city, but found all the stores closed from one to six on account of the fair. There I was, with only six plates, all fast ones, and nothing on which I could get

"THE MACHINE WAS SOME FIVE HUNDRED FEET UP AND A MILE DISTANT."

cloud effects. I reached the grounds at three forty-five, and found only fifteen thousand people there ahead of me, but derived some satisfaction from being able to get close enough to the race track to hear the horses' hoofs strike the ground as they went by. Finally, working my way through the crowd to the grandstand, I found they had stopped the sale of tickets at two o'clock. But, as the fox said of the grapes, I didn't want a seat, anyway, as the grandstand had a roof over it. Those who were seated in it could not have taken many pictures through that roof. Every other person I could see seemed to have a Brownie or camera of some size or description.

Going back of the grandstand, I found that had I a raft I could paddle or pole myself across the swamp located there and be in a position to get better views. With some waste lumber I made a raft that landed me on the opposite side, none the less enthusiastic for my water trip. A stiff wind was blowing from the west; and, judging that the aeroplane would fly east, I would have the sun at my back if it did so. At four-thirty it was rumored there would be no flight; and, as I did not want to return from a hundred miles' trip without pictures, I climbed up on the fence and made an exposure on the crowd, and then took two of the horse races, giving an exposure of one-thousandth part of a second. That seemed enough, as I felt something might happen on which I could use the other three plates.

At five minutes past five they wheeled the aeroplane out and pointed it in my direction. The bird man was going to start his flight toward the wind, just the opposite direction from what I had figured. All the professional photographers, and one man with a Reflex, were at the starting point, busy photographing the aeronaut and his machine, but as I had only

three plates left I remained where I was. I set my shutter at one eight-hundredth second, withdrew the slide, and waited. When the aeroplane started, it ran up to within fifty feet of me, rising about twenty-five feet above my head. I was unable to get it in my mirror as I waited until it was about one hundred feet from me, and then I took the picture first shown, taking it almost directly against the sun. I waited for the second picture until the machine was some five hundred feet up and a mile distant. It was then very nearly direct with the sun; but, on account of the lens being well back in the camera, no ill result seemed to have been invited. This exposure was also one eight-hundredth second. I wanted to make a picture with the sun to my side or behind me, but I did not know how many times the aeroplane would circle; so I saved my last plate in case something happened. And the unexpected did happen, only it was nothing serious. The photographers had figured on its alighting on the west and its running on the ground to where they were; but on its third lap it started to alight on the east of the field; and, as it started to run along the ground, I ran toward it, dropping my tension spring to one three-hundredth second, climbed the fence and took the last picture just as the man had jumped from his seat. Ten seconds later five thousand people had surrounded him, with the other photographers behind the five thousand.

"THE LAST PICTURE JUST AS THE MAN HAD JUMPED FROM HIS SEAT."

I ran for the car to the depot, caught my train, and arrived home at nine p. m., the train being late. I developed the six plates in my regular pyro developer; fixed, washed and—no, I didn't dry them with Negdry, alcohol or formalin; I had none. I put them in the drying rack, went to bed, set the alarm for three-thirty, got up, made thirty prints and started part of them to the afternoon newspapers on the six-thirty a. m. train.

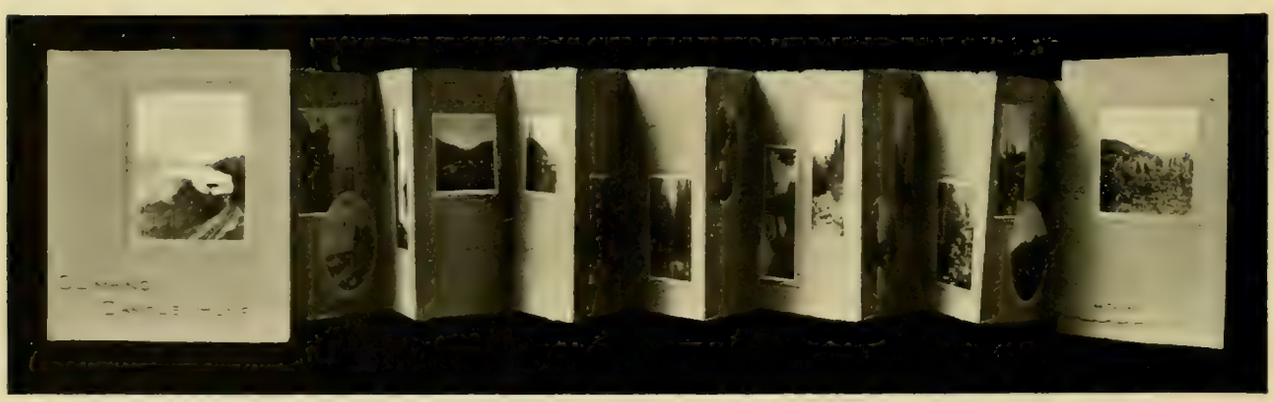
Christmas Albums Again

By Edgell R. Plaisted

Some have achieved success from having had but one idea—and others have failed dismally for the same reason. The following contains but a single new idea, and this may be old to somebody, but the holiday season is approaching, and some old ideas are often dressed up in new clothes at that time of the year, and acceptably.

The amateur photographer generally spends much of his substance making pictures for his friends. To show how these may be arranged to good advantage and where they will be preserved from the fate of most loose prints is my only excuse for bringing forward some of my own work in this line.

I was recently one of a small party of mountain climbers who had some rather unusual experiences on the top of one of our New England peaks, and I wished to give the other members souvenir books holding the Kodak pictures I had taken on the trip. The results of my labors were most enthusiastically received, and the expense for each book, pictures and all, was about twenty cents.



To make the inside pages I folded a strip of paper back and forth upon itself, as shown in the picture of one of the albums herewith. I used heavy, rough, gray drawing paper; and, tearing it from under a wooden ruler on a smooth table top, left the edges nicely "deckled" instead of the even cut of the shears. An album made in this way opens equally well on front or back; and, if one chooses, pictures can be put in on both sides of the paper strip.

Making the covers has heretofore been the most difficult and expensive part of these jobs of bookmaking, and I have made them in many ways. The most durable were stiff boards covered with bookbinder's leather, but these are hard to make, and still harder to decorate with pen-and-ink work or other similar effects. If one has a pyrographic outfit, limp leather in neat designs can be gotten up without much trouble, and birch bark is effective—while it lasts.

In the present instance I had several to make, and time was pressing; so I bought some large gray mounts, heavy ones, with an embossed panel

for a small picture in the center. For the back covers I trimmed them down and left the empty panel in the center, while for the front covers I trimmed tc bring the panel in the upper right hand corner. Then I put therein my best picture of the mountain we had climbed, and lettered it, as shown, in India ink. It was easily and quickly done, and looked better than any leather cover I have yet seen, though it will not be nearly so durable.

Under each picture I placed, in a similar style of lettering to that on the covers, a style that is easy to acquire, a descriptive remark or a well-known quotation, and in selecting or extemporizing such there is ample opportunity to add much to the interest of the book.

Our party of mountaineers happening to be made up entirely of musicians, gave me the "key note" for this particular job, and the first picture is "The tenor ascends 4088 feet above the high C."

The next picture shows the organist signing his name in the visitor's book, and is entitled, "The organist does a new stunt in registration," though this reference to his art might not be understood by every one. "Playing for High Stakes" shows the tenor and the organist's pupil playing quoits at this unusual elevation; and another picture has a quotation from the Scriptures, "And he took Him up into a high mountain."

One of my best books was labeled, "Good Old Times," and every picture in it showed good times we had shared with the family to whom it was given; one having been taken on a raspberrying expedition when we all got as wet as "drowned rats" and had our pictures taken in this condition. Another book was, "When I Was a Lad," and it held all the principal incidents in a boy's life, from the time he was ten until he was nearly twenty-five. These things are prized more and more as the years go by.

Whether expensive leather covers are used or whether the cheap card mounts are substituted for them, there are many color schemes that can be worked out to excellent effect. For ordinary velox prints, shades of gray paper are well suited; for those which have been toned sepia, buff paper and brown covers are better; while for blue prints or prints tinted with water colors, pure white is the best of all, though light tints can be used for water color books. Dutch tile effects can be secured by putting four small square blue prints on a page, preferably printed to have a narrow white margin, and mounted with edges touching, though not in the exact center of the page.

Strive to avoid a "set" effect, and make adjoining pages as different in arrangement as possible. Sometimes two or three pictures can be grouped to good advantage on a page; and again, one small picture looks best alone.

But I have told fully enough to set you planning for new effects of your own devising, which will be far better than copying what another has done. It is the touches of originality, of personality, that make such a gift prized so highly, far beyond anything that can be purchased at the Christmas shops. It takes time and patience to get them up neatly, however, so don't wait until December before getting your materials together and trying your hand at the work.

Photographing From a Balloon

By C. E. Mathewson

Illustrated by the Author and Others

MR. MATHEWSON AND THE "DIAMOND."

SENDING a camera up in the air by means of a kite, is one way of getting snapshots from above; but going up with the camera, using a balloon instead of a kite, is much more interesting. The three pictures reproduced herewith, the ones taken from the basket of the balloon, were made with an ordinary 3A Kodak. I could, as kind friends have since suggested, have gotten larger images with a telephoto lens, and larger pictures with a larger camera; but I think the ones I did make will answer quite well. I believe that not only myself, but the major portion of my friends, have learned to translate, if any translation be necessary, the every-day scenes around us into the simple terms of the snapshot. The use of special photographic apparatus might, in particular cases, give better results; but the pictures would require an explanation that in turn would mean a readjustment of what one might call the mental eye. I am not claiming any exceptional quality for the pictures shown herewith. They represent the scene just as the eye saw it. The slight lack of sharpness is, I believe, caused by the variation in the atmosphere, due to alternate warm and cold currents at different heights. The eye failed to see objects any sharper or with any more contrast. The focusing scale was set at infinity, the lens used at stop U. S. 8, and one one-hundredth of a second exposure given.

The first picture shown was taken shortly after we left the ground, the second at a height of about two thousand feet, and the third when the balloon was nearly a mile above the ground. This, coupled with the statement above, is about all that I can offer in the way of photographic infor-

mation. A brief account of the trip may interest the reader, although it will be impossible for me to convey an adequate impression of the interest connected therewith.

The start was made Sunday afternoon, October second, at two forty-five, from the aviation field at Sixty-third and Telegraph Avenue, Oakland. Four passengers were to have taken the trip, but at the last moment it was decided that the lifting power was insufficient, and the tossing of a coin decided that Professor A. Van der Naillen should be the disappointed one. This left Captain P. A. Van Tassell, Jack Wishar, and myself to make the ascent. The christening, an address by Dr. Dalziel, President of the Pacific Aero Club, and an invocation by Dr. Saunders, orders to cut loose, and the "Diamond" rose gracefully upward to a distance of three thousand feet. The view was magnificent. The sunlit streets appeared as silver threads, mountains dwindled to mole-hills, the Pacific Ocean gleamed blue to the westward, and all combined to make a beautiful picture.

AS THE "DIAMOND" ROSE GRACEFULLY UPWARD.

At this height a light current took the balloon and drifted it over the heart of Oakland and southward towards Alameda, still continuing to rise. At forty-eight hundred feet the heat was uncomfortable, and at the highest point in our trip, fifty-two hundred feet, coats were removed to give some relief from the excessive warmth. The upper current swept us out over the bay; but, when almost over Hunters Point, we came to a standstill through the failing of the slight current which had been carrying us somewhat to the south. Here we hung for over an hour, the balloon sinking a few hundred feet now and then, rising to its former height as ballast was thrown out. At no time had we experienced any sensation of motion, the only

means of determining our rate of travel being the location of some object below. Over the waters of the bay there was no sound except a deep note that reached us from the waves. With the aid of glasses we could see boats passing below, but they seemed to take no notice of us. I was told afterward that the balloon appeared but a small speck in the sky, hardly noticeable except when pointed out.

At five twenty the balloon was struck by a colder current and started to descend rapidly toward the water. At an altitude of three thousand feet another strong and still colder current caught us and started us back across the bay, the huge bag tipping and rocking in its rush towards the Alvarado marshes, still descending. At a height of five hundred feet we were about two miles from the shore, the balloon still descending and the speed increasing. As the aeronoid indicated two hundred feet we prepared for a struggle in the waters of the bay. At fifty feet, with over a hundred feet of our long drag rope in the water, everything, even the trinkets in our pockets, were cast out of the basket in an effort to lighten the weight. And then a current of warm air suddenly expanded the gas in the balloon and we rose to a height of six hundred feet, traveling toward the land at the speed of a railroad train. In our previous rapid drop we had fallen four thousand feet in less than six minutes. Then we were over the tide flats, traveling at a terrific speed, the balloon was settling, and we expected to strike the marsh at any moment. We had climbed into the rigging, ready to leap the instant the basket struck the earth. Here we hung, but just as we expected the basket to strike, we were again shot upward a distance of about five hundred feet, to be swept along over the desolate wastes of the marsh. Again we descended, the speed undiminished; again we climbed into the rigging, and a few minutes later the basket struck the earth with a crash. Into the air we were thrown, striking, as we fell, the soft marsh grass, rolling, with many somersaults, to lie breathless for a few minutes at the end, while the balloon continued on. The rip cord had drawn as the basket struck, and the balloon soon settled.

THE AVIATION FIELD FROM THE BALLOON.

FROM A HEIGHT OF ABOUT TWO THOUSAND FEET.

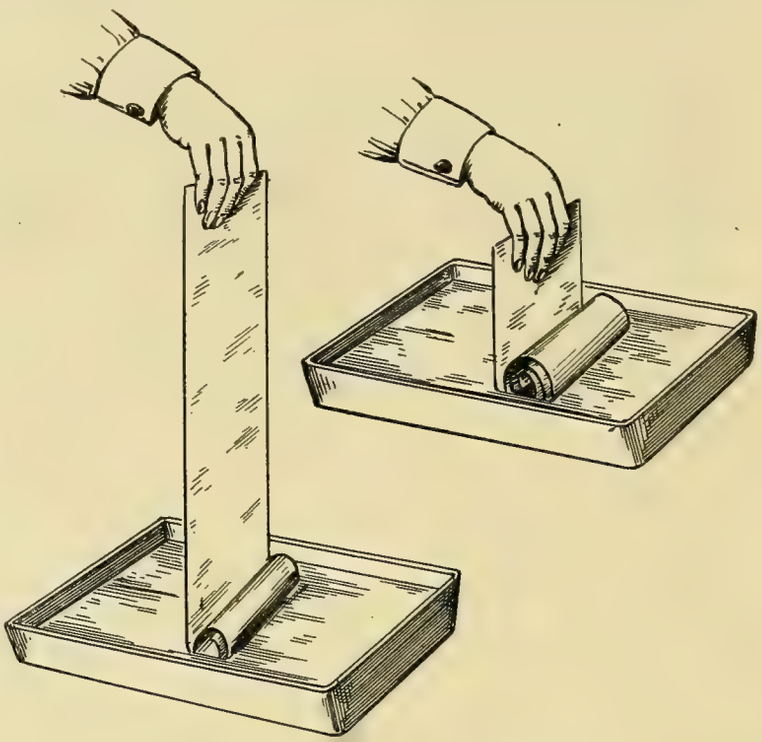
Captain Van Tassell sprained his arm in the impact; Mr. Wishar and myself suffering only bruises. The problem was then to find our way out of the marsh before dark, as we had landed far from any signs of a habitation. We waded through mud that severely taxed our strength, finally coming to a slough with a barn on the opposite bank. Some men had followed the balloon in an automobile, and they came to our rescue at this point. Lumber from the barn, a deserted one, furnished material for a footpath across the slough, got us into the automobile and headed homeward. Our trip was finished, and it had proved a success in every way. In the hands of men acquainted with the marsh, the getting home of the balloon the next day presented no difficulty. We were well pleased with our experience and are looking forward to another trip at no very distant day.

FROM A HEIGHT OF ABOUT A MILE.

An Easier Way With Roll Film

By James C. Mead

This is simply a different motion to the tiresome, see-saw one usually employed when films are being developed. In wetting them down previous to immersion in the developer, do not keep them in the water long enough to become limp, but remove them after a few quick swills. They will then retain some of their curling tendency, so that by taking one end in one hand and gradually lowering the film into the dish of developer, and then raising it out of the dish, it will be found that the film will roll and unroll quite readily, much as one would let out or wind in a reel. This method will result in quicker development because the roll is nearly always immersed in developer. The plan only occupies one hand, making it possible to develop a second strip at the same time by using the other. The illustration herewith shows quite clearly just how the film will behave. This will hardly interest the user of a film-developing tank, but then the tank is not always at hand, particularly when one is traveling.



STEREOSCOPIC NIGHT SCENE.
(Try it and the one opposite, in your stereoscope)

By W. C. MARLEY

Stereoscopic Night Scenes

By W. C. Marley

Stereo workers have often experimented in night photography, but without a fair percentage of successes. If the result proved to be a good single view, it generally lacked stereo-relief, from the fact that all easily visible objects were at a distance and the nearby foreground ones, necessary for relief, were black obscurities. On the other hand, if the nearer objects were well lighted, they, or the sources of their illumination, frequently caused so much halation as to ruin the effect. About the only possible class of views were those secured on wet or snow-covered pavements, from reflections from lamps at the rear of the camera. It occurred to me that it might be possible to produce good stereo effects by exposing two plates at sufficient distance from an intensely lighted scene to minimize halation, and at two such separated standpoints as to render actual stereo-relief in the nearest and middle-ground objects.

This result, impossible to accomplish in the daytime, from the many moving vehicles and persons, was easy at night, street-car and auto headlights being the only obstacles to perfect results.

Street vistas, illuminated public buildings, etc., are good subjects, and the best viewpoints are from some slight elevation, to aid in illuminating foreground objects. Separate your standpoints about one-eightieth of the distance from camera to middle-ground plane of desired view. As everything will be far enough away to be in "general" focus, extreme sharpness is not necessary, and large stops can be used, with consequent short exposures. Use backed or double-coated plates or films. Guard against "flares" or "ghosts," caused by cross-reflections in the elements of compound lenses. Time both exposures alike, of course. Trim prints identically, and cut out all foreground objects near enough to be distorted. I give below an example of the results produced by this method.

ANOTHER STEREOSCOPIC NIGHT SCENE. By W. C. MARLEY.

Saving Those Over-Exposed Prints

By D. P. Church

In using developing papers, either for contact printing or enlargements, you are, by all the rules of the game, entitled to a certain number of over-exposed prints. But there is no reason why you should lose either the paper or the time and trouble expended in making these prints. By using the following method you can turn these very dark prints into good ones.

First: these over-exposed prints must be fully developed. Do not try to save them by rushing them out of the developer into the short-stop or fixing bath. The results will be poor and, if you try to tone them afterward, the color will be an undesirable, sickly one. Develop them into strong prints, thoroughly fix, and wash until you are sure all hypo is removed. In my own practice I carry out this part of the work thoroughly, then dry the prints and lay aside these dark ones until there is an accumulation of a dozen or more, doing this to avoid too frequent use of the very poisonous bleaching solution. This bleacher is compounded as follows:

Cyanide of potassium	½ ounces
Iodide of potassium	20 grains
Water	16 ounces

Place the dry print, without previous wetting, in this solution. It will bleach slowly and evenly, but, when it starts to bleach, transfer it to a tray of water, where it will continue to bleach. When the desired reduction has taken place, stop the action at once by immersing the print in a ten per cent solution of borax. The prints may be allowed to remain in this last bath until all are done. A good final washing completes the process. But this washing must be thorough and a sponge or tuft of cotton used to clean the surface of the print.

With a little practice this method of saving too dark prints becomes quite easy and certain. The prints are lightened and at the same time improved in tone, being made blue-black with a delicate and pleasing quality that will tempt you to purposely over-expose some of your prints in order to tone them by this method for certain effects. The process is particularly valuable to the worker in large sizes, as it provides a means of making quite a saving of paper that would otherwise be thrown away.

"The object of landscape painting," said Corot, "is the imitation of light in the regions of the air and on the surface of the earth and of water. . . . One must seek above all else in a picture for some manifestation of the artist's spiritual state, for a portion of his reverie. . . . In the career of an artist, one must have conscience, self-confidence, and perseverance. Thus armed, the two things, in my eyes, of the first importance are the severe study of drawing and of values."

The Camera In The Home

By Mrs. E. A. Corwin

Illustrated by the Author

THE BOY SCOUT IN TROUBLE.

SIMPLIFIED photography, as exemplified in the small camera, the daylight loading film, and later, the developing tank, must appeal to every one, it would seem to me, could they but realize the enjoyment and gratification that it so readily furnishes. I know that I wanted a small camera for a long time before Santa Claus, that dear old conceit who knows so well the wishes of budding ambition, made me happy by placing a No. 2 Brownie in my hands. I was more than delighted. Now I could attempt some of the results I had so long wished to secure. I would at once set about acquiring the necessary information regarding the use of the camera, information that would at least let me prove my loyalty to the "craft." Even though I might not excel, I could at least measure results with some degree of understanding. I had always held the profession of photography in great awe, surrounding it with great mystery, some of which still remains; but today it is different. I am not nearly so afraid as in the days of my early attempts to master some of the elementary principles; and these mysteries with which I had endowed the practice of photography became a joy, affording pleasure in solving what I found to be very simple problems.

It was hard, at first, to reconcile myself to working in the dim light of the dark room. I wanted daylight to stream in so that I could see what I was doing and be sure that I was carrying out instructions correctly. And this was only one of the intricacies connected with my photographic experience which I had to meet and overcome. But results rewarded my efforts from the first. Not the results I had hoped for; my hopes had been entirely too high, as they are apt to be with beginners starting out full of enthusi-

DO YOU WANT IT? SPEAK FOR IT.

asm, but even my first efforts were not all failures. I had dreams, in my waking moments, of the pleasure it would afford could I only, by some happy combination of circumstances and my slight knowledge, produce a picture with sufficient merit to cause it to appeal to the mind of others. And that thought, that desire, has been an ever-present one. But the principal effort has so far been directed towards the catching, in permanent form, of the little every-day scenes of home life as I see them so unconsciously enacted all about me, always so real and always so appealing. I cannot help but feel that the reason why the user of a camera is, in some cases, disappointed with results is that they fail to realize the value, the interest, the human interest, of the homely little portrayals of these every-day scenes.

I have found, in my several years' experience, that a simple, cheap, small hand camera presents little or no difficulty. True, it has its limitations. Its lens will not permit of ultra-rapid exposures. Its shutter also precludes the taking of moving trains and the like. Its lack of a swing-back makes it necessary to avoid pointing it up or down at a building or like object unless one is willing to accept slight distortion. Lack of other refinements of camera construction further reduces its adaptability to rare and trying situations. But, on the other hand, the more expensive camera is made complicated, at least to the beginner, by its wealth of possible utilities, features that are seldom required in ordinary work. Without them, the manipulation of the camera is quite a simple matter. A very little patience and a small amount of discrimination make it far from difficult to produce results that are most gratifying. One simply has to overcome the desire to do the impossible. A fast moving train can be secured with a high-priced camera of special design. A towering building can be success-

WHEN THE BAND PLAYED.

fully negotiated with a camera having a swing back and rising front; snapshots on dull days are made possible by a high-priced lens; distant objects are photographed on a larger scale with a lens and camera possessing a long focus and extension. But why not leave all these to the specialist when we have such a wealth of more interesting material at our very doors, and material that makes no demand for any of these special equipments? The train caught at a high speed might just as well be standing still, and it is neither interesting nor pictorial. The tall building has little

A GAME OF MARBLES.

to invite the wasting of a film; if we can't get our desired quick snapshot on a dull day or in a poor light, there are plenty of days that are brighter or a spot may be chosen where the light is better. The distant object we can leave alone for that which is interesting and at hand.

THE TUG-OF-WAR.

But do not understand me to say that the small, inexpensive camera is not suited to overcast days. With its comparatively slow shutter speeds it is entirely satisfactory. I get my own best results when the sun is slightly overcast, insuring an evenness of lighting and wealth of detail not obtainable in bright sunlight. Most beginners make the mistake of working almost entirely in a light that gives too dark shadows and chalky high lights. I early found that I could make snaps in a light such as prevails during the middle of the day when light clouds cut off direct sunlight; and also in the shade of a building or trees, where strong reflected light from other portions of the sky than that about the sun kept the shadow from being too lacking in light. From this standard it is easy to calculate when a longer or shorter exposure is required. If somewhat later in the day, I knew I had to seek sunlight or use a slower shutter speed. If in bright sun at midday or in an open, exposed situation, where there were no near shadows in the view, I learned that I should use a smaller stop, which, except that the speed is not increased, is the same as making the shutter work twice as fast. Out on the water I could use the third or smallest stop to advantage. Where the shade was deep, as in a ravine, under a porch, and the like, I found that a time exposure was necessary because no light was received from the sky. One will find such confined situations quite deceptive as to the real lack of light. When one stands in such a place the eye adapts itself to the decreased light and the illumination appears stronger than it really is. It is this adaptability of the eye that allows one to read in a room that appears quite dark to a person entering from bright light outside. Going from a dark room out into the sun the light is painfully strong for a minute or two until the eye becomes accustomed to the stronger light. What the eye really does is to put in a smaller stop just as we put a smaller stop in our camera lens by decreasing the size of the diaphragm.

The matter of having some judgment in the length of exposure once settled, the rest is quite easy. Developing and printing are only a matter of following a few simple instructions that go with the films and paper. If difficulties arise, thresh out each one as it comes to hand, and they will soon cease to trouble you. But be sure you get the right answer. Early in my experience I was put to a great deal of needless experimenting by being told, by one who should have known better, that a certain film was underexposed; when, in reality, it was simply a case of underdevelopment. If a film is faulty, find out why, and do not make the same mistake again. The number of possible mistakes is limited, and you will, if you follow this plan, soon eliminate them. One should, if he will but keep in mind the

THE SUNDAY SUPPLEMENT.

limitations of his camera, and use reasonable care, require but little experience before being able to make six good negatives on each six-exposure film. A failure should be the exception.

It has been my good fortune to work much with children in my use of the camera, and I find great pleasure in employing them as subjects for my skill. They are usually responsive and adaptable, and yet one's hopes are often blasted by lack of spirit or expression. This is most often the case when I try to improve upon their own spontaneous and artless poses as they go about their play and pastime occupations. The scenes in which they play such an important part are opportunities within the reach of us all; they are the flowers by the wayside that we too often neglect. As subjects for my camera they have always appealed to me quite strongly;

IT'S JUST LOTS OF FUN.

and, in my small way, I have endeavored to portray these ever-changing, ever-present phases of happy childhood. The camera also aids me in obtaining the fullest possible enjoyment from my occasional outings and vacations. A memorandum here and there makes it easy to go over and again enjoy many of the happy hours so spent, and what better memorandum can one possibly have than a picture of the scene itself? And besides this, there is that ever-present possibility that a real picture, a picture that will claim and hold the attention of others may result. The little camera encourages and cultivates the perception, it opens the mind and the eye to the beauty all around us, both real and creative.

I appreciate to the full the larger and more artistic ideals of the pictorial workers, with their higher aims and greater possibilities, and I admire their beautiful productions. The work along the scientific and technical lines of photography inspires my respect and admiration, but I try to be content as one of the great army of amateurs that love photography for the pleasure it gives in its easy, simple phases. We amateurs know that our work is neither art nor science, but it helps to fill our hearts with tender memories and sweet experiences that can find expression in no other way; and, by it, we can bring back scenes and places that the eye and mind could otherwise enjoy but imperfectly. Such are some of the pleasures that I find in the use of my little Kodak; my friend, companion, and servitor on so many of my little journeys and during so many pleasant hours; as in the aftertime I collect about me the circle of scenes and faces that heart and mind so treasure, despite their unimportance and their fleeting nature, thoughts of home and friends, and ponder the mysteries of it all, and of my little camera and me.

A Lesson In Simplicity

We are reproducing herewith a picture, and quoting a letter concerning it, that explain themselves. Mr. Marsh is a member of the popular firm of Marsh-Girvin Company, whose handsome store is directly opposite the Call Building, in which our offices are located. He lays no claim to ultra-artistic proclivities; but, as the firm's advertising in our pages seems to show, he has a keen appreciation of the adaptability of pictures to photographic advertising.

THE BAREFOOT BOY.

It will be noticed that his picture, "The Barefoot Boy," is one that any competitor could easily have produced. A like model is available, anywhere, at almost a minute's notice. The accessories consist merely of a tin lard bucket, a small branch from a tree, and the Kodak required by the conditions of the contest. The landscape is one that imposes no restrictions; any bit of ordinary roadway would have answered as well, providing it was not discordant or productive of defective composition. In reality, the picture was made within a few hundred feet of where Mr. Marsh and his family camped during their summer vacation; the model being his son; the costume in which the youngster was allowed to enjoy himself suggesting the appropriate title.

And that is where an appreciation of the possibilities of the subject came into play. The "Barefoot Boy" is as well known a character, thanks to Whittier's charming verses, as any that one can call to mind, and he is a much more real and lovable character than most others. He is certainly much more easily impersonated, and in a much more convincing way, than would be one requiring theatrical make-up and costuming. He satisfies, as portrayed, and is understood at once. With a Kodak over his shoulder the story is told; simply, directly, and without any demand for an explanation.

We at once realize that the barefoot boy of today is only happy with a Kodak as his companion. The simplicity of the Kodak is emphasized by its association with the care-free youngster, his unconventional attire and simple angling equipment. The appreciation of all this, the requisite small amount of photographic skill, the selection of a setting in harmony with the figure, the skilful placing of the dark of the Kodak against a light part of the background in order that it would at once take its place in the story so plainly told, and a picture is evolved; a picture that not only wins a handsome prize, but one that must give its maker what is of greater value, the satisfaction of excelling in a competition that brings forth, no doubt, a larger number of competitive prints than does any other contest in the photographic world. Truly, a lesson in the value of simplicity.

THE LETTER.

Mr. R. B. Marsh,
San Francisco, Cal.

Dear Sir:

We take pleasure in notifying you that you have been awarded the first prize, Class "B," on your picture as shown by the small identification print enclosed herewith. Kindly forward the negative and permit from model, as per blank for that purpose enclosed herewith, and we will remit promptly.

Congratulating you upon your success and thanking you for participating in our competition, we remain,

Yours truly,
EASTMAN KODAK COMPANY.
L. B. JONES,
Advertising Manager.

Mr. Smith Visits The Coast

Just as we go to press we are favored with a visit from James H. Smith, founder of the well-known firm that has made "Victor" a household word wherever flashlight powder is used. Arriving the morning of the fourteenth and leaving early the next evening, Mr. Smith had time for little more than a handshake with the most easily reached of his many friends among the dealers in this city. He reports business surprisingly good and the demand for the flash cabinets for portrait work steadily on the increase.

Mr. Kaiser Goes East

L. M. Kaiser, member of the popular local firm of Hirsch & Kaiser, left for the East the early part of the month. Chicago, where he has many relatives and friends, will consume most of the brief time not taken up with the trip, which has New York as its objective point. This visit, Mr. Kaiser advised, is being made mainly as a relaxation from business, the season being selected with the expectation of avoiding both the extreme heat and the severe cold of the Eastern climate.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, NOVEMBER, 1910. No. 11

Our "Shop Talk" Last Month

At the time of writing this our last issue has hardly more than reached our more distant readers, and yet a most hearty response has been made, a response that will increase as time is given for the returns to arrive. Long lists of names have come to hand, we have been advised of dealers who should carry our magazine on their counters, suggestions for the improvement of the magazine have been offered, and a number of interesting articles are in preparation. All this is most gratifying and we hope the kindness will continue to be bestowed. But there is one matter that we failed to mention as fully as we would have liked last month, and that is the asking of questions by our readers. Because we do not delay all such answers for from two weeks to a month in order to use them in the pages of our magazine, the reader must not suppose that we do not answer a few hundred questions each month. We answer a large number, and answer them promptly, by mail. And what is more to the point, we are always glad to do so, always pleased to have the number of such letters increase. We, of course, have no desire to pose as an authority on all photographic subjects; but in a city like San Francisco it is not difficult to find a practical worker in almost any branch of photography. If our own knowledge does not supply the information, a telephone call, perhaps a personal visit, places the information in our hands. We have a full and complete photographic library, but it is little used in this work. As an example, a correspondent wrote in recently asking for a ferrotype developing formula. There were several old ferrotype workers within easy reach; but, as we feared, their experience had been confined to the older or wet ferrotype process. A letter addressed to our correspondent had previously disclosed the fact that what he wanted to use was dry ferrotype. All we had to do was to call up a dealer who supplied these dry plates to street men, and one of them promptly gave us the formula he was using with the best of success. However, in asking for the formula we were told repeatedly that we could no doubt find it in such-and-such a book, but this was not what we wanted. We were looking for a formula used by some one to whom we could turn in case our correspondent failed to secure good results. In this case the enquirer might have written that the image, produced by the developer in his hands, was weak and lacked color. With the formula coming from a practical worker it would have been an easy matter to have reported to him the want of success and been advised as to where the trouble originated. And our readers can see that, while the information may have been of the greatest value to this one particular subscriber, it was not of enough general

interest to warrant the use of space in our pages, even had we cared to keep the enquirer waiting that long. Send in your photographic queries; the more we can help you the better we are pleased.

A New Department

Receiving the support we feel sure our readers will offer, we will, in the January issue, start a new department, one made up of contributions by our subscribers. It will contain short paragraphs such as every reader can send in from time to time; on a post card, if that is most convenient. What we want are little hints of practical value, hints such as we use occasionally in our "The Amateur and His Troubles" department. If you have a pet formula for a developer, send it in. You may have seen some simple device used by another or may have devised some improvement in your own work. Jot it down on a card and send it along. Perhaps it is something you read in another magazine or book and have found of value. Send an account of your results for this department. Do not be afraid it is too simple or too well known. And above all, do not imagine your efforts to help will appear presumptuous or crude. Remember that we have a small army of readers who are distinctly in the beginners' class; and, should your suggestion not be new to a lot of our readers, another large portion will find them interesting and instructive. Should errors in spelling or construction creep in, we will set them right; that is what an editor is for. At the end of each little contribution used will be given only his initials or a nom-de-plume, as the writer may elect, but we must have the full name and address for our own use in case there are any questions to be asked. In return for every such note or paragraph we can use we will send the contributor some little token of our appreciation, a film negative, a small enlargement, or something to show that we are willing to make some return for the favor. Kindly let the responses be prompt and plentiful. Do not wait to see what the others send in, but send in your own contribution. Have the satisfaction of saying you were represented in the first instalment in the January issue. After you have sent the first one it will be easier to remember our wants afterwards, and in so doing help to keep the department well supplied. We are positive the department will prove to be one of the most interesting we could run if the readers will only take the little trouble required.

Some Mistakes

In the September issue, under the illustrations to the article on the Basilica, the French cathedral at Quebec, the exposure time was given as five seconds. These should have read five minutes in each of the three cases. Our apologies are due the maker of the fine stereographs, Harry Gordon Wilson, for the error. On page 353 of the October issue, the picture, "A Wayside Smoke," is credited to S. J. Adams. Mr. Adams' initials are I. C., and should have so appeared. More apologies. Both contributors write a very clear hand and our printers are most careful. The fault is entirely our own in both cases.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

STEREOSCOPIC PHOTOGRAPHS OF THE AURORA.

The recent revival in stereoscopic photography gives accentuated interest to the giant-eyed stereoscopic pair of pictures that is to be taken—all being well—of the Southern Polar aurora, by the Scott expedition, which has started from our shores. To realize what this experiment means, let us consider the case by easy stages, and so better grasp the meaning of a five-mile base-line. If we hold a pencil or other small object at arm's length away from and in front of the eyes, and view this object first with one eye and then the other, against a wall background some few yards away, the object is easily seen to shift its apparent position relative to the more distant background. Assuming the distance between the two eyes to be three inches, and the pencil to be twenty-four inches away from the eye, the lines drawn from it to the two eyes would enclose something between five and six degrees of angle, or, say roughly, one-sixteenth part of a right angle. If we moved the object to fourteen feet distance, this would give us an angle of one degree (one-ninetieth part of a right angle). If it be pushed back to a distance of two hundred and seventy-five yards the angle is now one minute, i.e., one-sixtieth of a degree. But now suppose that in place of our two eyes three inches apart, we have two cameras five miles apart, with lenses both pointed to the same object, we have increased our base-line one hundred five thousand six hundred times, and consequently an object two hundred and eighty miles away would subtend an angle, with this new base-line, of one degree, while an object sixteen thousand six hundred and sixty miles away would subtend an angle of one minute. It is thus at once apparent that increasing the base-line proportionately increases the distance range for a similar degree of angular accuracy. The Polar aurora has afforded ample opportunity for theorists to elaborate wonderful explanations, one of the most curious being that, like the rainbow, the aurora has no real position, and changes its apparent position with the change of the position of the observer. In the coming experiment it is proposed (so we understand) to employ the stellar background as viewed by two cameras pointed to the same constellation; the two observation stations, five miles apart, being in electric communication, it will be possible to synchronize the exposures. If only a few points of the aurora are sufficiently sharply defined for accurate measurement and identification, it will be comparatively an easy task to triangulate and calculate the position and distance of the aurora.—"Amateur Photography."

NOTES ON PHOTOMICROGRAPHIC TROUBLES.

There are two troubles not uncommonly met with by the photomicrographer that are especially annoying, more especially so because hitherto they have been regarded as absolutely unpreventable. One is the appearance of white lines in the positive running across the field in any direction—the result of scratches on the under-surface of the slip or the upper surface of the cover glass—and the other is a distressing lack of uniformity in the shading of the background, arising from the darkening in places of the Canada balsam in which the specimen is mounted. This is especially in evidence when the slide has been made for some years.

Speaking of the first, it must be primarily stated that the refractive index of the glass used in the making of most slips and cover-glasses is about 1.51. Now the cure simply consists of filling up these scratches (after careful cleaning) with some fluid having the same refractive index as the glass. This is read-

ily found by employing cedar wood oil, such as that used with immersion objectives.

The method used when dealing with scratches on the under surface of the slip is simply to drop a little of the oil on the surface in question, and then to cover the same with a cover-glass, taking care that this one is free from markings and all other blemishes. In most cases the scratches at once disappear, but should they not do so, it very possibly arises from the glass having a higher index than 1.51, say 1.53 or 1.54, or, on the contrary, a lower one, perhaps about 1.50. In the former case, then, a solution of Canada balsam should be employed, similar to that used for mounting specimens, whilst in the latter instance oil of cinnamon should be substituted.

When treating a slide which has a scratched cover-glass the same method can usually be employed, for the trouble is most commonly met with when dealing with specimens demanding the use of low-power objectives, having therefore long working distances. But, if the specimen requires a sixth, it is possible that this combination may not have a working distance of sufficient length to permit of the addition of an extra cover-glass, be it ever so thin. In this case, which is admittedly rare, it is necessary to purchase a lens of the long-working distance series, notably such a one as that made by Messrs. Watson & Sons, which has the enormous working distance of over even a millimeter. It is true this objective is not built for photography, but if a suitable screen—one about wave length 5,500—be employed with an isochromatic plate, very good results are obtainable.

It should here be mentioned that filters of any wave length are now readily procurable, by employing one or more of the very excellent set of screens made for photomicrography by Messrs. Wratten and Wainwright, the outcome of numerous experiments by the Dr. Mees. So valuable are these that no photomicrographer should be without his set, as their judicious use will better his results in a most surprising manner even with the use of apochromatics.

As regards the second trouble—the unevenness of the background resulting from the patchy discolorations of the Canada balsam—this can be prevented as easily as the previous annoyance. It is only necessary to select a screen or a combination, from the set before referred to, that will furnish a deep yellow, and to use a yellow stained plate. The exposure should be sensibly prolonged, so that when the negative is developed it has a very dense background. On printing from this, it will be found the background is sufficiently uniform in most cases even to satisfy the sharpest critic.—E. J. Spitta, F. R. A. S., in "Photography and Focus."

HOW TO IMPROVE NEGATIVES BY LOCAL INTENSIFICATION AND REDUCTION.

The subjoined article by A. T. H. M. contains some, if not new, at least little known, suggestions of great value. There is no doubt but that great and valuable control can be exercised over the negative, but all work done thereon is, for the most part, irrevocable, and too often means the entire loss of the negative, for which reason I have long believed that if the subject of a defective negative justifies the trouble of change, it is far preferable to make an enlargement on semi-matt bromide, make your changes under conditions that enable you to immediately judge of the results, and therefrom make a new negative. From a very large experience in chemically modifying negatives and prints, I would again urge the value of dividing the reduction process into two stages: First, a reduction with ferricyanide and bromide of potassium to white bromide of silver, when, if a mistake is made it can immediately be rectified by a little developer applied with a camel's hair brush; and, second, when all is right, immersion in hypo removes silver bromide. Intensification with dyes is all right; but, unlike A. T. H. M., I think any dye will do when you know its power of light absorption. I have long used Bismark brown. Workers in the United States will find the well-known Diamond dyes (seal brown, etc.) excellent. The article by A. T. H. M., in a recent issue of the "Amateur Photographer," is as follows:

Among the many thousands of negatives made by amateur photographers there are always a considerable number that need a certain amount of improvement in the shape of after-treatment before they will yield good prints. The subjects of general intensification and reduction have been dealt with on many previous occasions, and for dealing with the completely under or over exposed plates these methods are fairly well understood—even by the novice. It is, however, when partial or local alterations in the density of the image have to be dealt with, or where defective or unnecessary portions have to be blocked out or reduced, that greater knowledge and skill are required.

Yet, with a little patience and care, it will be quite possible to turn many "rejects" into quite passable negatives that will give good pictorial prints.

The following method of local intensification or blocking-out is novel, and, in addition, very little practice is necessary to render it certain. It consists of the application of dilute aniline dyes to the gelatine film of the negative, painting the color on wherever intensification is required, and adding considerably more when complete blocking-out of any undesirable features is required.

With these dyes another distinct advantage is claimed, that parts of a negative can be intensified to any desired depth. The importance of this latter will be readily recognized and appreciated, as one frequently obtains a negative, parts of which would benefit by intensification; yet by the usual method of, say, mercuric iodide, when the whole of the plate is bathed, naturally all those parts which have not developed out fully in the developer are equally affected, which, perhaps, was not required.

To secure the best results, it is imperative that the colors used must correspond as nearly as possible with the color of the negative image. Take that of metol and hydroquinone, which usually develops out in a blue-black image. The solution of dye required for blocking-out is as follows: Dissolve three drams of Bengal blue and three drams French black in ten ounces water. This makes a concentrated solution, and must be diluted considerably, according to the desired depth.

For negatives developed with pyro-soda the image is usually of a brown-black color. Make up the following concentrated stain; half ounce maroon dissolved in ten ounces water. This must also be diluted according to strength required.

For filling up spots in portrait work, after retouching in the usual manner with pencil and medium, the following dye produces a fine effect: Make up a one in one thousand solution of naphthalene yellow, and apply to the negative one or two coats.

Now for the actual operations. Place the defective negative in the retouching frame, pour out a small quantity of dye in a suitable receptacle, and dilute to match as near as possible the color of the developed image, preferably on the light side, as one or more applications can easily be given; take up a small quantity on a camel or sable hair brush, and paint quickly and evenly over the defective portion; wait until this is quite dry, which will be rather quickly, before making the second application. With very little practice one will soon be able to rectify otherwise useless negatives, and more or less every negative made by an amateur will benefit by a little local retouching by the dye process. The following formulae for other shades may also be useful: Dark blue: Dissolve three drams Bengal blue in ten ounces water. Light blue: Dissolve three drams bleu de lumière in ten ounces water. Greenish blue: Dissolve three drams bleu de vert in ten ounces water. Dark red: Dissolve three drams fuchsine and one dram orange in ten to fifteen ounces water. Reddish violet: Dissolve three drams methyl violet and one dram fuchsine in ten ounces water. Brown: Dissolve three drams Bismark in ten ounces water. All the above are in concentrated form, and it is advisable to make up with boiling water.

If the surface of the negative is inclined to be greasy, a drop or two of liquid ox-gall added to the water in which the dye is dissolved will make the color take easily to the film.

There are, of course, several other methods of local intensification which are more chemical in action than the foregoing, but the method given is so simple and under control that it is easily first for

practical utility. Should, however, other means of increasing the density of parts of a negative be desired, the application of any ordinary intensifier—such as mercuric chloride or uranium—with a brush to the necessary parts will, if carefully done, bring about the necessary increase.

The reduction of density in certain portions of a negative and not in others calls for even more care and attention than local intensification. The latter, if wrongly done, can be rectified in a measure by complete intensification; but when a portion of the image has been reduced or removed, it cannot be replaced.

In the case of a negative that is too dense all over, complete reduction in the Howard-Farmer, or hypo-ferricyanide reducer is the usual remedy.

Often, however, we find that only a portion of the negative is too dense. Frequently the sky in a landscape requires reducing. In architectural work, especially in interiors of churches, etc., the windows often appear much too dense in the negative, although, perhaps, the other parts are of correct density.

We will take the case of the landscape first. As the portion of the negative to be reduced is at one side of the plate only, it is quite a simple matter to hold the negative with the sky portion downwards, and apply the reducer to that part only with a camel hair brush. If we are working on a large negative, a small pad of cottonwool may be substituted for the brush with advantage. The easiest sky to reduce is one into which no objects project. A capital negative to practice this method on is one where the skyline is nearly level, such as a view on a flat marsh, where the skyline is touched by a range of low hills, or a belt of trees, a long way off. A seascape with a perfectly clear view of the horizon is also an easy one to deal with. The most difficult sky to reduce is, of course, one into which a number of intricate details project, such as a view of a harbor showing the masts of the boats, etc., or a street scene with rows of chimneys.

Sometimes, in dealing with such a negative, it is best to entirely ignore the objects projecting into the sky, and reduce them with the latter. Afterwards, the negative is coated with "matt varnish," either on the film or the glass side, and the details, such as the masts, chimney-pots, etc., are worked over with a pencil and brought back to proper printing density, or the local intensification method described above can be employed with advantage.

It is sometimes necessary to reduce a small part of the negative only, such as a window in a church interior, or in a portrait perhaps a white dress, or even a face. Such features are often much too dense in the negative, and they are seldom quite on the edge of the plate, so that we cannot hold the negative vertically, and allow the reducer, which has been applied to the dense parts with the brush, to drain off into the dish. If we did so, we should reduce other portions than those desired. The following plan will be found very satisfactory:

First of all, we must work in front of a rather low window, or arrange a lamp or light of some sort so that we can see through the negative when it is held level in the hand. If the dish containing the ferricyanide is a white porcelain one, when the negative is held over it the dish forms a reflector. With a well-arranged light we are able to see all the details of the negative quite clearly. When working with the brush, it is, of course, only necessary to have quite a small quantity of reducer, say a couple of ounces, in the dish, and if the dish is tilted so that the solution runs to one end, we have the greater part of the bottom of the dish as a reflector. A dish rather larger than the negative is most useful.

The negative is taken from the hypo solution and held vertically for the bulk of the solution to run off. The film is then "dabbed" lightly with a good size piece of cottonwool. The object of this is to prevent the reducing solution spreading beyond those parts which it is intended to reduce. A moment's consideration will show that if the film is very wet, the reducer applied to it will readily spread and get beyond control. All surplus moisture being got rid of, we hold the negative as nearly level as possible, and apply the reducer to the parts desired with a small soft brush. The brush must not be charged too heavily with the solution, or drops or splashes on the negative will result, each drop leaving its mark behind in

the shape of transparent spots. The reducer should be applied deliberately and without hurry. The outline of the part to be reduced must be followed as accurately as possible.

The progress of the reduction must be most carefully watched, and at the least sign of the solution spreading beyond its proper boundary, the negative must be instantly plunged into water or washed under the tap. If several distinct parts of the negative require reducing, it is best to take them, one at a time, as it is almost impossible to watch two parts or more at the same time in a sufficiently careful manner to ensure complete success. Also, it is advisable not to leave the reducer on the film for more than a minute or so at a time. After washing off this ferricyanide we examine the negative critically. If not reduced enough, place in hypo, drain, and repeat the reducing until the desired result is obtained. If the solution should spread too far and reduce the negative in parts where the reduction is not wanted, if the process has not gone too far, the negative need not be thrown away. When dried it can be coated with "matt varnish" and the portions accidentally reduced can be carefully filled in with a lead pencil or stump.

After the negative has been correctly reduced, it should be put back into the ordinary fixing solution for a few minutes, then thoroughly washed and dried in the usual way.

It is not generally known that the reducing powers of the hypo-ferricyanide bath can be considerably modified. The way to alter the effect of the solution is to increase or decrease the quantity of ferricyanide with reference to the hypo. The more hypo present the more even will be the reduction, and, therefore, if it is desired to increase the contrast as little as possible, the best time to apply the solution is immediately after the plate has been fixed; or, if the plate has already been allowed to dry, first soak it for ten minutes in the usual fixing bath to allow the hypo to permeate right to the back of the film. If it is desired to minimize still further its action on the shadows, the addition of a little potassium bromide will help. If, on the other hand, it is desired to clear the shadows without affecting the lights, allow the negative to dry, and then use a solution with very little hypo and a larger proportion of ferricyanide. By the judicious use of one or other of the above formulas almost any case can be satisfactorily dealt with.

PHOTOGRAPHING BY INVISIBLE LIGHT.

As is well known, the light which surrounds us consists of waves in the ether, and these waves are of different lengths, one of the qualities connected with the wave lengths being color. Thus red light is of a different wave length from green, and green from blue. Over and above the light to which our eyes are sensitive, there is light which, while darkness to us, is, to certain sensitive media, as much light as the rays which the human eye can perceive.

These invisible light rays are described by scientists as "infra-red" and "ultra-violet," according to whether their wave lengths are longer or shorter than the wave lengths of red or of violet light which are the boundaries of the visible rays.

Plates can now be made sensitive to the "infra-red" rays, while without any special steps, the ordinary photographic plate is very sensitive to the "ultra-violet," so that it is possible to photograph subjects by a light in which the eye has never seen them.

The use of orthochromatic plates and suitable light filters enables us to obtain photographs which are strikingly different in their relative tone values from those which can be got on ordinary plates. Yet all of these differences, it should be remembered, lie within the limits of the light to which our eyes are sensitive.

The ordinary plate used in the ordinary way records the impression of the object as if it were illuminated by blue and violet light only; to the red and yellow it is almost color blind. If we have a deep enough color screen and a red sensitive plate, we can go to the other extreme, and record the object by red and yellow light entirely, or we may hit a mean between the two, and get a mixed impression corresponding to what the eye sees.

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

THE COLOR OF THE WALLS.

A correspondent in Massachusetts is fitting up a home studio and wants to know the best color and finish for the walls. Evidently he contemplates an inexpensive building and this suggests either plain boarding, or something of that kind, to be covered. My own preference is for a dark green burlap, put on in strips running up and down, and fastened with large-headed bronze tacks placed along each lap about six inches apart. This makes a nice finish, one on which pictures can be hung to good advantage, and the tacks can be drawn and the burlap removed and dyed at any time that its fading makes it desirable. One can hardly expect any paper or cloth to retain its color for any great length of time under the trying light of a studio. The burlap will, gradually, turn a sickly yellow, but that must be expected. The tacks are much better, giving the room a more massive effect, than does cutting the walls up into sections with narrow strips of wood to cover the joinings. Green is a color that reflects but little, if any, light; and that is what must be achieved in the studio walls. The operator will find reflected light that is under control, the light from his reflector, for example, a good thing; but light reflected from the walls is not under such control, and is sure to cause annoyance and trouble.

ABOUT SODIUM SULPHITE.

A correspondent writes in to ask why it is that some writers caution him against allowing his sulphite to dry out, because it turns to sulphate, which last is a restrainer, rather than a preservative, and yet, his dealer desires to sell him dry or anhydrous sodium sulphite. And the dealer cannot explain or tell him where the inconsistency lies. Ordinary sodium sulphite in the crystal form contains just half its bulk of water. Evaporating this water of crystalization it effervesces and turns to a white powder, a lower hydrate of the sulphite, having all the preservative qualities of the original crystals, but double the strength. But by exposing the crystals to air, particularly if the air be somewhat damp, the water of crystalization is taken up and the sulphite is oxidized into a sulphate by the air. A sample so exposed may effervesce and oxidize both, the oxidation being greater as the air is damper, and less as the air is dry. This oxidation takes place even more rapidly in the case of a solution exposed to air or made with water containing a large quantity of air. This is why it is recommended, in so many formulas, to use water that has been boiled, that is, water from which the air has been expelled by boiling. This also explains why solutions of sodium sulphite do not retain their desired preservative qualities and freedom from restraining action, due to the change to sulphate, for long, unless made up with boiled water and kept in well filled and well stoppered bottles. The dealer is perfectly right in recommending the desiccated or anhydrous form as it has been deprived of its water of crystalization without oxidation being allowed to form sulphate; hence, the danger of its becoming oxidized, while in your hands, is removed.

IN REPRODUCING NEGATIVES.

I suggested, recently, in talking with a worker who was dissatisfied with the quality of his reproduced negatives, that he could improve his results by using backed plates. As it looked to me, he was simply getting a slight veiling, due to reflection from the white paper on his enlarging easel, or the back of his printing frame, when making the transparency, and again additional veiling when making the enlarged negative from the transparency. This did not seem to him to be the trouble; he was sure he could find some developer that would overcome the diffi-

culty. However, I persuaded him to try an experiment. We first placed a piece of printed matter, good large black letters on a white card, against the easel, and on this placed a plain plate; then making an exposure through a thin negative in the lantern. Upon developing, a clearly perceptible image of the printed matter was brought out on the plate, showing that there was an almost entire absence of veiling in those parts that came directly over the black of the letters; and, by contrast, a perceptible veiling in the parts over the white of the card. The same experiment was tried in making a transparency by contact in a printing frame, the plate used being an ordinary one, backed up with a piece of the same card carrying the large black letters. There are a number of good backing compounds on the market, and the annuals give several formulas. They are quickly applied; and, unlike the backing of plates to be placed in holders for camera use, there is no occasion to wait for them to dry. A piece of ordinary brown paper may be applied to the wet backing if it is desired to avoid soiling the face of the easel or the back of the printing frame.

GRAIN IN COPYING.

And this brings me, quite naturally, to a kindred class of work: copying. The grain of the paper on which the original is made is always intensified in the copy negative. Much, if not all of this trouble, can be avoided by unmounting the print to be copied, wetting it, and squeegeeing it face down to a sheet of glass, and copying it through the glass. If it is found that the print dries and comes away from the glass in places, before the adjustment and exposure can be made, use a mixture of glycerine and water. Of course, photographing the original through the glass in this way, makes it necessary to watch closely to see that no reflections are present. And there is another application of this same method that it is well to bear in mind. One may wish to make a number of Christmas cards, the kind that show several photographs surrounded by a fancy border, and all photographed down to the proper size. If one will prepare a suitable border design on a suitable scale, leaving blank spaces for the photographs to be used, the same design can be used for any number of photographs that are of the right size. All that need be done is to lay down the large card on which is drawn the design, and place the glass on top. Then, with a bit of hard soap, mark the outline of the openings for the pictures on the upper side of the glass; turn it over and squeegee in place the desired set of prints. When dry, again place card in position, wipe off the soap marks from the front, and photograph all together. This operation can be repeated as many times as one has different sets of prints that he desires to use in the one border design, making a negative for each, but making the one design answer for all. As in the case first mentioned, reflections from the surface of the glass must be avoided.

PERMANENT NEGATIVES.

A New York correspondent wants to know how he can secure the maximum amount of permanency in his negatives without regard to expenditure of time or money. There is really nothing much to it. First, the fixation should be complete. This means the use of a fresh hypo bath and allowing the negatives to remain in it some time longer than is required to remove the last white appearance of the undeveloped silver; say, as long again as it took for this last trace of milkiness to disappear from the back of the plate. Washing should be long enough to remove all hypo, and this stage can be easily determined by applying the simple test we have given several times, or which can be found in any of the annuals. After washing, the surface should be swabbed with a tuft of wet cotton and the negatives placed to dry. Once dried, a rub with a clean cloth dipped in alcohol will improve the surface of the film and remove particles of dust and dirt not too deeply imbedded in the gelatine. If the negatives are then all right, that is, if reduction or intensification, either wholly or locally, is not thought necessary, a soaking in a bath of formaline should be given to harden the film. In fact, this formaline treatment can follow washing and thus avoid drying the second time. After the formaline treatment, particularly if the weather be damp, the negative should be subjected to heat to make sure that all moisture is driven out of the gelatine film. This done, and while the plate is still warm, apply a coat

of good negative varnish. A good sample of varnish can be determined by coating a waste negative and allowing it to soak in water for some minutes. If the varnish is one that offers good protection against moisture it should stand the test of a soaking in water, except as the water may get to the gelatine around the edge of the plate. So treated, a negative should be about as permanent, under any ordinary conditions, as the glass plate upon which it is coated.

TITLING NEGATIVES.

I saw some very neatly titled prints recently and asked the maker how the work was done. I had, a few days before, explained to a caller how he could produce white letters in a dark part of the print by transferring written titles to the moistened gelatine film at a point on the negative which printed dark, but here was a case of dark letters on a white or light portion of the print, and I could not understand it. He explained that it was simplicity itself. He made a solution of red prussiate of potash, used that as an ink, with a clean pen, writing the desired title on a piece of good writing paper. Then the desired portion of the negative was wetted evenly and lightly; that is, so that there was no surface moisture, and yet the film is swollen with the water. The inscription is placed down upon this receptive surface for a minute or so, taking care that it does not shift. The paper is then carefully peeled off, and a solution of hypo applied, when the lettering at once turns white. A better plan is to plunge the whole negative into an ordinary fixing bath, after which it is washed in the usual way. Treating only a part to the hypo solution necessitates washing of the whole, so the fixing bath is best applied in the same way. Of course, the plan is nothing more than the local reduction of the parts forming the lettering with the well known Farmer's reducer.

REDUCING WITH AMMONIUM PERSULPHATE.

I recently told a correspondent to reduce his over-developed negatives with ammonium persulphate, because it would cut down the more opaque portions considerably, before the less dense parts in the shadows were affected. And the advice is good for under or correctly exposed negatives that have been over-developed. A negative that has been over-exposed requires different treatment, as the high lights are inclined to be lacking in density and the shadows too strong in deposit. Farmer's reducer, with its inclination to reduce the weaker portions first, brightens up such a negative by acting upon the thin, yet too dense shadows, before attacking the too thin dense portions representing the high lights. But to return to our ammonium persulphate: my correspondent came back with a complaint that stains had resulted. He had, evidently, used a formula calling for a plain solution, and the chemical, in such a solution, has a bad habit of occasionally giving irregular action and stains; but H. W. Bennett gave, in a former issue of the "Journal of the Royal Photographic Society," a formula for a solution that is free from this objection and one that keeps indefinitely. It is as follows:

Ammonium persulphate	...240 grains
Sodium sulphite	..... 48 grains
Sulphuric acid	..... 48 minims
Water, to make	..... 5 ounces

This should be made up a full day before being used. To use, dilute with nine times its bulk of water, making it a one per cent solution of the persulphate. This, of course, is a very weak solution, and as one gains confidence in its use, stronger solutions may be used. One part of the above and four parts of water being easily under control, once the worker learns to gauge the right time of removal from the solution. The tray should be rocked; and, the white precipitate seen above the denser portions as the action takes place is a sure sign that all is going well, as the turbidity goes on. As in the case of a plain solution, the action starts very slowly and becomes more rapid as it progresses. When the right stage is reached, or just before, the plate should be washed quickly in three or four changes of water, then placed for ten or fifteen minutes in a one in four solution of hypo, the regular strength for plate fixing, then washed and dried as usual. The negative becomes brown in the reducing solution and then changes back to black or a brownish black in the fixing bath. No staining takes place.

International Photographic Association

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NEW MEMBERS.

2593—Don R. Winslow, Box 184, Zumbrata, Minn.
Post cards, developing paper, of landscapes and street scenes; for any kind of pictures. Class 1.

2594—E. B. Eliason, Electric, Mont.
5x7, various papers, of landscapes, groups and some speed work; for good pictures of any kind, in prints and post cards. Class 1.

2595—E. Herbert Dingley, Farmington, Maine.
3¼x5½ and 8x10 enlargements, various papers, of general views, landscapes, and outdoor life; for views of especial interest and pictures illustrating different industries. Class 1.

2596—Maurice Windus, Ronan, Mont.
Class 2.

2597—Miss Daisy R. Gorham, Box 12, Gorham, Kans.
3¼x5½, various papers, of views, scenery, children and animal portraits; for scenery, views on water, mountains, children, and animal pictures on developing paper only, size 3¼x5½ or 4x5. Class 1.

2598—W. Westover, 19 N. Ferry St., Schenectady, N. Y.
Class 2.

2599—Lester C. Anderson, 4619 Station Ave., Norwood, Ohio.
Class 3.

2600—Frank E. Ludlum, 70 Orange Road, Montclair, N. J.
Everything up to and including 5x7, various papers, of miscellaneous subjects; for the same. Class 1.

2601—W. H. Stapleton, 404 E. Belknap Street, Ennis, Texas.
Class 3.

2602—Roy N. Reebel, 154 Fairmont Avenue, Youngstown, Ohio.
2½x1¼, developing paper, of views and portraits of general subjects; for anything of interest. Class 1.

2603—Jos. A. Snitily, R. F. D. No. 2, Prague, Nebr.
Class 2.

2604—Clifford Hampton, Castlewood, S. D.
4x5, developing and printing-out papers, of groups, views, scenes, etc.; for views and genre, in post cards only. Class 1.

2605—Orville Hills, 2313 N. 2nd Street, St. Joseph, Mo.
5x7, 3¼x5½, and 2¼x3¼, various papers, of anything I think will make a good picture; for landscapes and portraits; post cards only. Class 1.

2606—Fred E. Davis, Gemmell, Minn.
4x5, developing paper, of logging and Northern landscape views; for landscape and historical views. Class 1.

2607—John B. Gurley, Box 42, Maltby, Mich.
5x7 and post cards, developing and printing-out papers, of farm scenes, logging camps, all kinds of lumber scenes, landscapes, etc.; for anything of interest, in post cards only. Class 1.

2608—Alfred Gates, Box 93, Treherne, Man., Canada.
5x7, 4x5, and 3¼x4¼, developing paper, of farm scenes, landscapes, town and country views; for stereoscopic views for the most part, but can exchange some of the other sizes. Class 1.

2609—R. Fortuna, Box 35, Maben, Ala.
5x7, developing paper, of general views; for the same. Class 1.

2610—Bert Adkins, R. F. D. No. 3, Milford, Texas.
8x10, 5x7, and 4x5, various papers, of groups, buildings, and landscapes; for post cards only. Class 1.

2611—B. G. Harbour, 34 Auburn Avenue, Atlanta, Ga.
Class 2.

2612—E. R. Hall, Culebra, Canal Zone.
Class 3.

2613—Ralph D. Reed, 924 W. Chicago Street, Lebanon, Ind.
5x7 to post cards, developing paper, of general views; for the same in post cards only. Class 1.

2614—L. B. Browne, Box 4, Castor, Alberta, Canada.
Class 2.

2615—Grant Luzader, Box 5, Pennsboro, W. Va.
Class 3.

2616—Arthur J. Whiddon, Waterville, Wash.
5x7, developing paper, of general landscapes, portraits, etc.; for post cards and other prints, not lantern slides or stereoscopic views. Class 1.

2617—T. H. Davidson, Box 11, Coon Valley, Wis.
Class 2.

2618X—George H. Webb, Columbiana, Ohio.
Post cards, developing paper, of general views; for anything of interest. Class 1.

2619X—Frank Smith, R. F. D. No. 1, Oneida, N. Y.
Post cards, developing paper, of scenery, buildings, parades, floats, statuary, farm scenes, etc.; for the same. Class 1.

RENEWALS.

247—William Service, Silverton, Ore.
Class 2.

947—Harry M. Biggin, Sharon, Pa.
3¼x5½ and larger, of landscapes, genre, and portraits; for the same, and especially portraits in fancy lightings; post cards preferred. Class 1 for good work only.

672—H. L. Dillon, R. F. D. No. 3, Darlington, Pa.
5x7 and smaller, developing and printing-out papers, of farm scenes, country views, and animal flashlights; for street scenes and harbor views with shipping of this country and foreign. Class 1.

1915X—E. S. Warner, 2409 Seventh Avenue, New York, N. Y.
3¼x5½, developing and printing-out papers, of city, park, and general views of local interest, also snow, marine, and historical views; for good work only; no junk; post cards only. Class 1. Having been ill since last March, some of the records of my exchange have been mislaid or lost; if parties to whom I owe cards will kindly let me know, will be pleased to send cards due.

2076—Herman J. Becker, Lock Box 64, Cascade, Iowa.
Post cards. Class 1.

2095—Gustav G. Stortz, 2424 Germantown Avenue, Philadelphia, Pa.
Also wishes bathing and camping scenes and views.

2100—Mrs. R. E. Pennington, Rte. 3, Box 386, North Yakima, Wash.
Class 2.

2120—Arthur E. St. Clair, Lordsburg, Cal.
Stereos of mountain views; for stereos of more than local interest; good work only. Class 1.

2150—Clifford L. Cox, R. F. D. No. 1, Healdsburg, Cal.
Class 2.

2169X—John Parpal, Jr., 1322 Elysian Fields Avenue, New Orleans, La.
Post cards and prints up to 6½x8½, developing paper, of all subjects including the out-of-the-ordinary views in Central America and Panama; for anything excepting ordinary views and landscapes or public and private buildings; extending and reserving the right to return all work not fancied. Class 1.

2174X—Mrs. R. H. Blair, Humptulips, Wash.
Post cards. Class 1.

2176X—Phil A. Friedell, Box 44, Victor, Mont.
3¼x4¼ and 5x7, developing and printing-out papers, of landscapes, fast-moving objects, sea views and others; for similar views. Class 1.

2185X—Dr. Gabriel P. Flores, care College of Physicians and Surgeons, San Francisco, Cal.
Post cards only, various papers, of yachts, animals, automobiles, marine views and landscapes; for anything interesting, especially speed pictures; in post cards only. Class 1.

2184—Henry D. King, 167 Clinton Avenue, Brooklyn, N. Y.
Class 2.

2220X—H. W. Tehune, St. John, Wash.
Is changing from Class 1 to Class 2.

2455—Elliott S. Blakely, No. 86½ Union St., Lynn, Mass.
5x7, developing paper of flower studies, both wild and cultivated; for the same. Class 1, for sample exchange as above only. No post cards. Make good work, and want only such in exchange.

CHANGES OF ADDRESS.

191—Mary E. Tuttle, Box 137, Dover, N. H.
(Was Box 337.)

518—E. W. Sawyer, 41 Parkview Mansions, Toronto, Canada.
(Was 75 Dinidonald Street.)

1878X—Miles J. Breuer, University Station, Austin, Texas.
(Was 1379 East 57th Street, Chicago, Ill.)

2010X—W. L. Peterson, Box 478, Nephi, Utah.
(Was Mendon, Utah.)

2047X—G. L. Waterbury, Walsh, Ont., Canada.
(Was Burnside, Ky.)

2124—W. L. Crose, 1820 So. 6th Street, Council Bluffs, Iowa.
(Was 1702 So. 9th Street.)

2156—G. Leonard Pitchford, 1321 6th Street, S. E., Minneapolis, Minn.
(Was 320 15th Avenue, S. E.)

2180—G. R. Radley, 182 2nd Street, Milwaukee, Wis.
(Was 207 15th Street.)

2278—L. T. Neikirk, 907 W. Neveda Street, Urbana, Ill.
(Was Boulder, Colo.)

2402—F. C. Hollopeter, South Milford, Ind.
(Was Shelton, Nebr.)

2417—Frieda Sutherland, Box 340, Renville, Minn.
(Was Minot, N. D.)

2457—John Shahan, Jacksonville, Ala.
(Was Attalla, Ala.)

2467X—Peter Nick, 433 3rd Street, San Bernardino, Cal.
(Was Los Banos, Cal.)

2475—E. C. Kenney, Perry, Wyoming Co., N. Y.
(Was Castile, N. Y.)

2484—John H. Vale, Apt. 5, 1228 E. 13th Avenue, Denver, Colo.
(Was 215 McPhee Bldg.)

2535—R. D. Count, 1209 Hennepin Avenue, Minneapolis, Minn. (Was 89 Spruce Place.)

WITHDRAWALS.

2137X—Guy A. Chumpner, R. F. D. No. 1, Republic, Wash.
On account of lack of time.

2540—J. R. Cunningham, Valles, S. L. P., Mexico.
On account of traveling.

2559—R. H. McKay, Missoula, Mont.
On account of lack of time.

In Professional Fields

THE WOMEN'S FEDERATION.

The Women's Federation of the Photographers' Association of America is beginning a new year of active work. Last year's efforts yielded very gratifying results. We want this year to be even more successful, and we ask the earnest co-operation of every woman photographer, either as an active or associate member. The following article will be of interest to all who wish to become members of the Federation: Article 3: Membership. The membership shall consist of active and associate members. Active members shall be professional women photographers, who are active members of the Photographers' Association of America. Associate members shall consist of all other women photographers.

The work this year through the "Circle" will certainly be very interesting. The membership list is already very large, making it necessary that the exchange of prints be made at one specified time, in order to facilitate the work of Miss Belle Johnson, Monroe City, Missouri.

Section 7 of the By-Laws will be of interest to all desirous of becoming members of the "Circle." It reads as follows: Section 7: Each member of the Circle shall promptly forward all prints received, to the next member, and shall, when mailing them, send postal to the First Vice-President, notifying her that the prints have been mailed. Failure to promptly forward prints and send postal will result in a fine of fifty cents for delinquency, as the success of the Circle depends upon the prompt forwarding of all pictures received.

The membership fee of the Federation is only fifty cents, which covers the expense of membership in the Circle, if such is desired. To those who are not already members we extend a hearty invitation to join us in our effort to make this a banner year.

Very sincerely,

MAYBELLE D. GOODLANDER,

Secretary and Treasurer.

AN INTERESTING LETTER.

Stein Portraits by Photography.

Milwaukee, Sept. 9, 1910.

Mr. Joseph Byron,

Marbridge Building, New York.

Dear Mr. Byron:—Inclose you New York drafts of $8.90; $3.90 of which is for bill for copyright form books, which please receipt and return to me. The $5.00 is for a year's dues in the League.

Beyond all question, from my point of view, the League can only attain its fullest value on the basis of a large and representative national membership. Many members mean weight and influence; moreover, a big member roll means a solid financial backing. We need both. With them the League may be a power; without them, it is little more than a nullity. Now comes the question: How are we to attain that desirable result?

The League should have an assured income of at least $5,000 a year; two of the important measures it would make possible being (a) the employment of a secretary, who should devote his entire time and energy to the voluminous League correspondence and the cognate duties that would inevitably accrue; and (b) retaining the service of a competent copyright counsel to whom all legal questions could be referred without charge to the individual members. Now, if the minimum annual dues are fixed at a dollar a member, a roll of 2,500 gives us a fair start toward the end at which we are aiming. It is understood, of course, that any increased amount of dues is purely optional with any member. But, on a one dollar basis, the revenue of such a member roll falls far short of what is needed, and makes it necessary to make up the deficiency by a call for extra contributions from those who most earnestly appreciate the task by which the League is confronted.

This plan, being dependent upon certain conditions, is not a satisfactory one, and it puts the League in the position of "passing the hat around" in a fashion that might not be hurtful to the feelings

of a professional beggar, but is certainly not befitting the dignity of an important and self-respecting organization.

What is wanted, and needed, is a stable and assured revenue. Might it not be practicable to ensure it by a plan of graduated dues? It is only fair, anyway, that they who derive the greatest benefit from the work of the League should be the most liberal contributors to its support.

Most of them have already, and I feel little doubt that many of them would, engage to contribute dues ranging from $5.00 to $10.00 a year until such time as the increased member-roll of the League would bring in sufficient single annual dollars to insure a good working capital.

As a means of obtaining the desired wider interest and support, I would suggest that each State organization take up the matter and join the League in a body. The trade magazines also, should be interested and urged to boost the League and keep its work and aims in prominent evidence. They should be "fed" with frequent items and articles on League matters—lists of members, reports on copyright legislation, etc.

My letter has spun out longer than I thought for; but, as it clearly outlines my views, I guess no harm is done.

With best wishes for the League's successful future, believe me,

Cordially yours,

(Signed) S. L. STEIN.

Our Book Shelves

"COLLODION EMULSION."

"Collodion Emulsion," by Henry Oscar Klein, comes to us in the form of a handsomely bound book, the second edition of this standard work. Mr. Klein is best known to our American readers as the translator of Baron Hübl's "Three-Color Photography;" in England he is known as being closely identified with what may be called the re-introduction of "Collodion Emulsion," during the last ten years, a work that has resulted to no small extent, from the efforts of Penrose & Company, the publishers of the book. Exhaustive, thorough, and practical, are all terms that may be applied to this book; as, in a most marked degree, is it entitled to them. While the facts given are based on the most scientific and exact forms of research, the results and the deductions therefrom are placed before the reader in the simplest and most convincing words. Directions and formulae are given, not merely as such, but coupled with such suggestions and recommendations as an author, who is himself a thorough master of the work, can supply. No part of the subject is neglected from the ordinary ferrotype emulsion and its manipulation to the requirements of direct three-color half-tone and spectrographic work. The price is not given, but it can no doubt be obtained direct from Penrose & Company, 109 Farringdon Road, London, E. C., England, postpaid, upon remitting five shillings and the necessary postage, six pence, this being the price of the former edition.

"DIE TECHNIK DES PLATINDRUCKES."

In this, the fourteenth volume of the Photographic Buchersschatz, the author, Felix Naumann, has written and compiled one of the most complete and comprehensive manuals of platinum printing it has ever been our good fortune to see, in any language. The history and the chemistry of the process is treated in such a way as to make that part instructive, leading naturally up to the resultant best methods. Practical instructions are given with a thoroughness that leaves nothing to be desired. The use of paper negatives, methods of double printing, dodging, mounting, surfacing, all come in for full and explicit directions as to working methods. The book contains one hundred pages and a number of illustrations, and formulas in great numbers. It is published by Ed. Liesegang's Verlag (M. Egger), Langastrasse 5, Leipzig, Germany. Price, Marks 2.50; bound form, Marks 3.00, postpaid.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

SOME HANDSOME BACKGROUNDS.

We recently visited a new studio in this city, one that has recently been fitted up without regard to expense, by an old hand in the business, and the handsome grounds at once attracted our attention. They were all the work of the Chicago Photo Scenic Company, whose advertisement has appeared in our pages the last few months. The above remark about expense not being considered, is not to be taken as implying that the Edgewater grounds are expensive. It simply shows that these grounds were not purchased because of their low price. While the prices are right, the quality is superb, and it could hardly be otherwise; the firm being composed of some of the oldest men in the business, the firm itself being one of a number of years' standing. Write them for a catalog, addressing, Chicago Photo Scenic Company, Hartford Building, Chicago.

AUTOTYPE CARBON.

The new price list of the autotype carbon tissues and materials is now ready. To those who have not yet worked this beautiful, permanent process, with a range of thirty-seven different colors, this manual will be a splendid introduction to the carbon picture. With the price list is combined condensed instructions, articles on manipulation of different transfer papers, carbon ceramic tissues, and the three-color carbon process. If you will send your name and address to the agents, George Murphy, Incorporated, 59 East Ninth Street, New York City, they will be pleased to mail you a copy.

SOME GOOD CUTTERS.

The average photographer fails to realize the satisfaction that can be derived from the use of a well-made, accurate and dependable print trimmer or cutter, until he happens to get possession of one. He struggles along with an unsatisfactory tool, perhaps feeling that there must be ones that are rightly made, but neglects to look into the matter. The line of cutters put out by the Milton Bradley Company, Springfield, Massachusetts, is one that can be recommended, without any reservation, as filling all the requirements. Bradley cutters are known all over the country as the dependable kind. They are manufactured by a firm that has made several other lines of goods, the staples of their kind, and their cutters are in the same class. We have used one for several years, finding it quite a convenience in straightening and squaring up the prints we receive from all over the country for reproduction in our pages, where the squareness of the copy is important. Write the firm for their illustrated circulars, pick out the cutter best suited to your wants, and then insist on getting it from your dealer. You will be pleased with its work

THE IMPERIAL EXPOSURE METER.

At this season, as the days become shorter and the light less actinic, it is difficult to determine the duration of a correct exposure, owing to the rapidly changing actinic quality of the light. An actinometer exposure meter is essential. The Imperial Exposure Meter meets the requirements fully. It measures accurately the actinic power of the light, and gives the correct exposure accurately under all conditions. One simply counts the seconds required to tint a small piece of paper, and then push along a sliding scale to the number of seconds indicated, when the correct exposure for any stop is shown in plain figures. No calculation is involved, thus precluding possible errors through haste, and only the one scale to set. The meter sells for fifty cents, and soon saves its cost in correctly exposed negatives. Ask G. Gennert, 24-26 East Thirteenth Street, New York, or 16-20 State Street, Chicago, for circulars giving full particulars.

THE PHOTO AUTOPRESS.

In the July "Camera Craft" mention was made of the new photographic printing machine about to be placed on the market, the invention of Glen M. Dye of Lamar, Colorado. This machine, named the "Photo Autopress," was exhibited at the Milwaukee P. A. of A. Convention in July, and created an immense amount of interest owing to the many unique features of the machine, especially power operation by means of an electric motor, and automatic movements taking the place of hand work in feeding the paper, making the contact, and timing the exposures.

As a result of the Convention display, which demonstrated the widespread demand there would be for the Photo Autopress, the manufacturers, the G. M. Dye Printing Machine Company, decided on Minneapolis, Minnesota, as a more central location for making and distributing the machines, Minneapolis being the home of C. Frederick Potter Jr., who is president of the company. Mr. Potter will be remembered as former publisher of "Western Camera Notes," a magazine which was merged with "Camera Craft" some three years ago.

The Photo Autopress is being manufactured under the personal supervision of Mr. Dye, the inventor, and of Mr. Potter, who is a photographic expert; both being practical photographers of many years' experience. The machine is sold under their guarantee to be mechanically correct and to fulfill every requirement in printing with developing-out papers. Since our first mention of the machine, several improvements have been made, the capacity has been increased to eighteen hundred prints per hour for quantity postcard work, and an auxiliary hand-operated contact provided for proofing and for making single prints as in amateur finishing. The fundamental principles of the machine remain the same as first described in these columns, chief of which is the electrical sympathy between the time-controller and the light. This feature gives absolute uniformity in printing any number of prints from the same negative, regardless of the fluctuations in the strength of the current. Photo Autopress printing thus means mechanically perfect results and uniform printing, so that automatic development of prints is possible and practical. The G. M. Dye Company have perfected a developing system of racks and tanks, by means of which one hundred prints may be developed in one minute and remain in the racks during fixation and washing, requiring no handling until they are ready to be dried.

For the publishers of post cards, where an immense amount of work is to be handled, the Photo Autopress will be specially equipped with a loading device which will fill the racks (holding one hundred cards) with the cards as fast as printed. Special negatives may be made, carrying two subjects, and double width cards may be used which are cut in two when finished, thus increasing the capacity of the machine to thirty-six hundred post cards per hour. The automatic developing system will permit the chemical processes to keep pace with the rapid printing.

This, of course, is a special use for the Photo Autopress, but the average photographer will realize that when the finest work can be done at this high speed, the machine will be of the utmost advantage to him in every-day work at more moderate speeds; no matter how many prints are wanted from a negative, they can be made quicker and better with the Photo Autopress than in any other way, and when the right time is once determined for any particular negative and paper, he cannot over-print nor under-print, therefore cannot lose a sheet of paper even on a run of hundreds or thousands of prints. Check up your waste-paper basket every day and see what this "stop-loss" feature would mean to you in a week or a month. Again, the advantage of automatic, mechanical operation is evident when we find that one man with the Photo Autopress can turn out more work and better work than three men with any hand method of printing. A saving of two-thirds in labor means a good deal to most photographers; add to this the elimination of paper waste, and the capacity for increased business made possible by the Photo Autopress, and it would seem that this machine will be indispensable to the fraternity.

A descriptive booklet will gladly be sent you by the G. M. Dye Printing Machine Company, Minneapolis, Minnesota.

LEARN TO COLOR YOUR PHOTOGRAPHS.

Coloring your photographs, and thereby multiplying their value many times, is as simple as it can well be if the right kind of colors are used. The famous Japanese Self-Blending Transparent Water Colors are so easy and simple to use that one is ashamed to claim, or even accept, any credit for the beautiful results they make possible. Be sure to get the right kind, a picture of the book of colors is shown herewith, and you will have no difficulty in producing work, the beauty of which is only limited by your own appreciation of

what is right as to colors As the name suggests, the colors seem to flow and blend of their own accord, all the worker having to do being to see that the right colors are applied to the right localities. The requisite amount of skill is very small. Circulars can be obtained of the manufacturers, the Japanese Water Color Company, 144 East Forty-fourth Street, New York, and Rochester, N. Y.

A BORDER EMBOSSER.

Too late for comment in our last issue came the advertisement of the Border Embossing outfit, put out at the low price of one dollar by the St. Louis-Hyatt Photo Supply Company. These are selling like hot cakes to the discerning professionals in the large cities, and the out-of-town photographers should not delay in sending for one and so assuring their own work that finished appearance that too often is the distinguishing mark between their work and that of the more up-to-date brother photographers who are located where they can see each other's productions. The amateur, with his natural inclination to mounting papers on one hand, and unmounted prints on the other, will find the Embosser a simple means of enhancing the appearance of his work. The outfit is one we can endorse as entirely satisfactory in every respect.

A PHOTOGRAPHIC SECTION.

The Manchester Institute of Arts and Sciences had a camera section, an active one, in the best sense of the term. A preliminary meeting, held recently at the studio in the Mirror Building, brought out a goodly number, and much enthusiasm was shown.

Mr. Fred T. Irwin, a camera enthusiast of the first water, acted as chairman. It was the privilege of those attending to listen to a practical talk on photography by Frank A. French, of the Varick Company, a recognized authority along that line.

Mr. French went back a decade in his discussion of the old camera club, which, though it flourished for a time, gradually sank out of sight, until finally absorbed, with all its belongings, by the Institute of Arts and Sciences. He deplored the present day snapshot tendency, asking that the camera be used for work of some permanent value, and that a desire on the part of the operator to improve and excel be made the idea and spirit of this new movement on the part of the section.

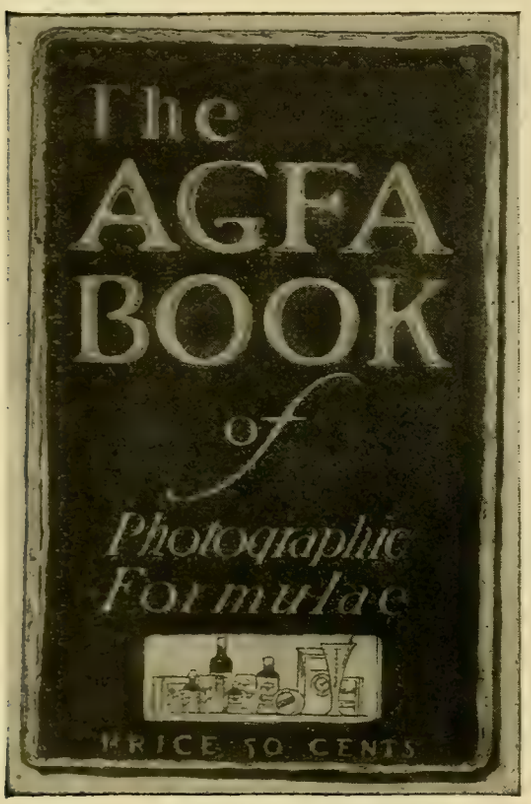
Following Mr. French's much-appreciated talk, Mr. Irwin called upon President Albert L. Clough, of the Institute, who expressed his pleasure at the rejuvenation of the section, incidentally calling attention to the benefits to be derived from becoming affiliated with the Institute as a member. Miss Theodora Richardson, a member of the Council, and an interested promoter of the work, announced dates for future meetings, the members meeting at the rooms to go out picture-taking with Mrs. Kellogg, and other dates, when Mr. Irwin will be at the rooms to assist any members of the class in bromide enlarging and developing.

The remainder of the evening was most interestingly passed, Mr. Irwin showing a large number of lantern slides, mostly views through the White Mountains and familiar scenes throughout New Hampshire and Massachusetts.

Attention was called to the fine equipment of the studio, open to the members; few camera clubs, in fact, being so well favored. The little reception room has been made very attractive, and what it is possible for the earnest worker to accomplish is shown by the attractive display on the walls.—Manchester "Mirror."

"THE AGFA BOOK."

We would advise each and every one of our readers to send for a copy of this valuable collection of photographic formulas. All that is necessary is to send a label from any wrapper from any package of "Agfa" photographic chemicals, and ten cents in stamps or silver to pay postage and packing. Your dealer carries the Agfa chemicals, some eight or ten popular developers such as Metol,



Amidol, Rodinal, and the like, and then there is the popular Agfa Reducer, Intensifier, and last, but not least, the Agfa Blitzlicht, which you should give a trial now that the long evenings are coming on, and a perfectly safe flashlight powder almost a necessity. The book is well gotten up, very complete and convenient in its arrangements, and its scope can be judged from the number of pages, one hundred and sixty in number. Send the label and ten cents to Berlin Aniline Works, 213-215 Water Street, New York.

MR. BODINE OFF FOR EAST.

H. Oliver Bodine, manager of the Photo Crafts Shops, will leave on the eighteenth of this month for an extended trip through the East.

Mr. Bodine will spend a week in Rochester, and will study the manufacture of kodaks, cameras, films, plates and papers from the bottom up. Special privileges have been extended him so that all the inner workings of the various manufacturing processes will be shown and explained to him in detail. While there he will also study most thoroughly the manufacture of photographic lenses.

On the twenty-eighth of September he will deliver an illustrated lecture before a body of two thousand men, comprising the owners of the various drug stores throughout the United States and Canada who compose the United Drug Company of Boston. His talk will be mainly on the running of a photo supply department in connection with a drug store, and will also touch on the possibilities of pictorial photography. Mr. Bodine being invited to give this lecture before such an important gathering in Boston is considered very complimentary to Racine.

Since coming to Racine, Mr. Bodine has pushed the mail order branch of the business all over the United States, Canada, Mexico, and even into foreign countries across the water. He is making Racine a prominent spot among the photographers of the country, and from the plans which have been outlined for next season, one of the largest and most complete equipped commercial studios in the country will be in evidence here in Racine.

Those who have not taken the opportunity of visiting the Photo Crafts Shops, which are located at the corner of Fifth and Monument Square, should avail themselves of the privilege and see what a wonderful little business has been developed in this city.—Racine "Daily Journal."

SOME RECENT INTERNATIONAL EXHIBITION AWARDS.

Messrs. Burroughs, Wellcome & Co. have obtained what is believed to be a record number of distinctions in an exhibition of international character. The products of this firm have been awarded eight grand prizes, three diplomas of honor, and one gold medal, at the Brussels International Exhibition. Five grand prizes and one gold medal have also been awarded to the firm at the Japan-British Exhibition, London, 1910.

Vol. XVII No. 12 DECEMBER, 1910 Price, 10 Cen

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"WEEDING."
By H. OLIVER BODINE.

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Camera Craft

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XVII. SAN FRANCISCO, CALIFORNIA, DECEMBER, 1910. No. 12

Making One's Work Pictorial

By H. Oliver Bodine

With Illustrations by the Author

Mr. Bodine advises that he will be pleased to answer any questions, criticise prints sent him, or render any assistance he can that will help any reader desirous of taking up pictorial work. He does not wish to pose as an authority, but feels that he can at least offer such help and encouragement as he himself would have been glad to have had at an earlier stage of his own progress in the field of pictorial photography. Correspondence addressed simply, Oliver S. Bodine, Racine, Wisconsin, will reach him promptly; and, while he does not say so, we trust that our readers will remember to enclose postage, preferably an addressed and stamped envelope or wrapper, when writing him or sending prints for criticism.

PORTRAIT OF THE AUTHOR

I have often been asked what led me to take up pictorial work as a hobby; the kind of outfit that I use, and the methods pursued to obtain prints having sufficient merit to be accepted by the American Salon and the principal exhibitions throughout the world.

Some two years ago I was in Chicago, doing commercial and newspaper work; and, by chance, dropped in at the Art Institute while the pictures of the Fourth American Salon were on exhibit there. I had often been approached by friends, interested in pictorial work, who endeavored to persuade me to take it up as a hobby; but my work being confined to a line in which it was absolutely necessary to obtain results, results with all the detail and sharpness possible, I failed to see wherein they, what I at that time termed fuzzy types, were at all interesting. I looked over the pictures comprising the exhibition, and I must say that my first

impressions were not favorable to pictorial work. But I was persuaded by a friend to accompany him on a second visit, and he was kind enough to give me a brief talk on pictorial work. He called my attention to one picture in particular, and I believe we spent at least an hour in studying it alone. My friend pointed out what had been, on my previous inspection, unseen beauties in it; merits which I had not been able to understand and appreciate before, not having the basis on which to work that he, with his knowledge of pictures, so kindly gave me. One or two days later, happening to be in the vicinity, I again went in to look over the pictures; and, to be frank, this one print, over which we had spent so much time, seemed to have a fascination for me, and it was to again see it that I made this third visit. It seemed to come to me, suddenly, that there were many very beautiful pictures on the walls, even though they were inclined to be fuzzy. And that is how I became interested in pictorial photography.

I was, at that time, working with a 5x7 and an 8x10 camera, and anastigmat lens; and, during my spare moments, I made several negatives; copying, as near as I could, the style of some of the pictures I had seen in the Salon. The results were not at all satisfactory, either to myself or the critics to whom I sent them, and I was about to give up the work as beyond one not supplied with a number of special lenses and the necessary equipment, when I had the pleasure of meeting an officer of the American Federation. I had moved from Chicago to Racine, and had joined the local camera club, a club that had become a member of the American Federation of Photographic Societies. When the Salon exhibition was in Racine, members of the club made prints from their own negatives and exhibited them in a separate room. Several members of the Chicago Camera Club visited us one evening, and we asked them if they would be kind enough to go over our pictures and criticize them. I had one print on the walls, one which I thought was about as fine as could be made, one of the first prints that I had made of my "Daisies." On coming to this, Mr. Tuckerman, then president of the American Federation, said to me: "You have, in that, the foundation for a very beautiful picture. What is the title of it?" I answered, "Daisies"; and he said: "If it were my print, I should title it Tree, because the tree predominates over the interesting part of the picture to such an extent that your title does not fit it." He then took a piece of paper and covered up at least one-half of the top, which consisted only of the top of the tree. He had no sooner done this than the daisies seemed to jump out and make themselves felt. I made a new print, following this and several other minor suggestions given by him at the time; and, in the Sixth American Salon, one of my three accepted pictures was my "Daisies." I had been following in the wrong path, and needed but the kind criticism and help of one who had passed through the experimental stages to put me on the right road.

I next obtained several inexpensive books on pictorial photography, and on composition, and read them over carefully during my spare moments. Before this I had taken several trips along the river which runs through our city, and had taken a great many bird's-eye views, views which were

IN WINTER'S GRASP.
By H. OLIVER BODINE.

not at all interesting, either to myself or to those to whom I had shown prints. But, after my course of reading on composition and pictorial work, I again started out for a long tramp along this river. I wanted pictures, and I had no sooner started than I saw innumerable beautiful subjects that I had not before been able to see, just because I had believed that to get a good picture it was necessary to include a vast amount of subject with full detail, in fact, practically a bird's-eye view.

I had been working with my 5x7 camera, an anastigmat lens, and using plates, and obtaining with them very good results. However, I found that in using anastigmats they gave me negatives too critically sharp to give the atmosphere, or atmospheric effects, that I desired. I tried a number of lenses that were supposed to do this, but none of them seemed to give the results that I desired. I finally got in touch with a gentleman in charge of the lens department of one of the large optical concerns in the East, a gentleman who had been working along lines similar to mine; and, after considerable correspondence, calculations and trials, we succeeded in working out a lens that would do the work and that could be sold at a moderate price.

These, in cells to fit any standard make of shutter, I have been putting on the market for the last few months; but, while they do the work, the focal length has been found too short to give the ideal perspective. This has been corrected, giving me a new "Pictorial Lens," which, I am sure, will be appreciated by those using it for pictorial effects. It can be used to secure those mass effects, or as fine detail as can be desired. This is accomplished by simply changing the opening of the diaphragm; the larger the opening the softer the results. The makers of these lenses assure me that they can be used not only for pictorial negatives, but when stopped down to f-16 or smaller, will give critically sharp negatives, making them suitable for copying, enlarging, and general work. Used at openings larger than f-16, the results become softer and softer; until, at f-5, one can obtain those beautiful masses and atmospheric effects that are so much desired by pictorial workers.

I take all my pictures reasonably sharp; and by this I mean I do not stop down the lens, always use it at a large opening, working for a negative with sufficient detail in the foreground and middle distance, but gradually growing softer in the distance. From such negatives as I think are worthy of being worked up, I make contact positives, and from these positives, after some slight retouching if thought necessary, I make enlarged negatives, usually 8x10 or 10x12. My prints are made by contact on either bromide paper or on Kallitype paper which I coat myself. Experience has taught me care in composing the picture on the ground glass makes it rarely necessary to do any doctoring on the negative. In my collection there are not to exceed half a dozen negatives which have had any amount of faking or doctoring. All have been spotted and had the pin-holes filled up, but none of them have had any great amount of work put on them. I have also found that a print is not a picture until it has been trimmed correctly and mounted in good taste. When I first started out I would usually find my picture contained in an area of about 1x2 inches on my 5x7

THE NIGHT COMETH.
SEVENTH AMERICAN SALON.
By H. OLIVER BODINE.

SUNLIGHT AND SHADOW—WINTER. By H. OLIVER BODINE.

negative, the remainder being unnecessary material which simply weakened the result and detracted from the real picture. My later exposures are all made with the idea of using as much of the negative as possible.

I have often been asked how many good pictures I take during a season, and my answer has invariably been, "If I can get two or three which please me during a summer or winter I am thoroughly satisfied and repaid for the work and expense they have entailed. I have often started out in the morning and tramped all day, only to come back without having exposed a plate; but those trips have done more to show me the beautiful works of our Creator, beauties which I had not before seen and beauties having an educational value that could hardly be figured out in dollars and cents.

My favorite developer for negatives is the ordinary M.-Q., such as can be bought at any supply store. When I have more than three negatives to develop I use the tank method. I use an acid fixing bath as recommended by the makers of Velox paper; using it full strength for papers, and one half strength for negatives. If I were asked to suggest an outfit for pictorial work, I would say: Use the outfit which you now have, for with it you can obtain negatives which will make Salon pictures, if you but first master the underlying principles of pictorial work. Any person of fair intelligence can master this last in a few evenings by a study of one of the standard works on composition, any number of which are to be had. Of course there is, in my estimation, an ideal outfit for those who have the money to spend

and who desire to be equipped with everything necessary for any condition that may arise. For those who are lucky enough to be in this class I will catalogue an outfit such as I have found to be thoroughly practical and complete. A 5x7 view camera such as the Number 2 Century or Premo, with long bellows extension, and a large lens board; a good strong tripod and a pictorial lens, in barrel or shutter, with a focal length of about twelve inches.

Used intelligently, this lens will give you any desired softness, ranging from those charming mass effects so effectively employed by the Photo Pictorials of Buffalo, to negatives having the very finest detail. The outfit should also contain a good focusing cloth, at least a yard and one-half long, and a ray filter, preferably one that is graduated from dark yellow at the top to plain glass at the bottom. This last is of special benefit in pictorial work, aiding one in avoiding bald-headed negatives. I have a Collinear lens, with a focal length of seven and three-fourths inches, which I carry with me, but only use occasionally. I have confined myself to two plates, the

DAISIES. By H. OLIVER BODINE.

THE BIRCHES.
SEVENTH AMERICAN SALON.
By H. OLIVER BODINE.

WINTER. SEVENTH AMERICAN SALON. (Ozobrome.) By H. OLIVER BODINE.

Standard Orthonon for general use and the double coated Non-Halation for winter views.

My exposures are all made as rapid as possible, and as explained before, with a large diaphragm opening. The main thing to remember, in composing your picture, is that it must not include two subjects of equal importance. Pick out one subject and then arrange it so that it will stand out and predominate. Have as many lines as are possible lead to it. Good pictures are those which suggest their own title, or those that tell a story without recourse to the words lettered below. There are opportunities in every locality for pictures that will make Salon entries. You need not go far afield or deep into the woods to find them. In every large city there are numberless subjects that will make pictures having pictorial value. In the smaller cities and towns, where one has the benefit of foliage, shady streets and old buildings, many pictures will present themselves to the eye capable of selecting pictorial subjects. I am sure that if many of the amateurs who today go out without any set purpose, except to snap here and snap there, would take a few minutes each day and read over a good author on pictorial composition, read and follow the instructions to be found in the photographic magazines, and grasp every opportunity to see the work of leading pictorial workers, they would eventually decide to embark in that most interesting of photographic pursuits, "Pictorial Photography," the possibilities of which are practically unlimited.

BIRTH OF A WINTER'S DAY. By H. OLIVER BODINE.

Californians In The Salon

The catalogue of the Seventh American Photographic Salon, just to hand, shows that eight Californians had thirteen pictures accepted. The list is as follows: Herman O. Albrecht, three; E. R. Allen, one; Laura Adams Armer, one; Jesse T. Banfield, two; Francis Bruguiere, two; R. S. Crandall, one; Louis Fleckenstein, two; and E. N. Sewell, one. Such a weak showing, in the small number of workers represented, is to be regretted. Personally, we know of but one worker on the Pacific Coast whose pictures were all returned; and three or four of those having pictures accepted aspired to salon honors for the first time. These facts should encourage others to offer their work next fall, to the end that California be fittingly represented next year.

Mrs. Lewis H. Bissell Here

Mrs. Lewis H. Bissell, of Effingham, Illinois, spent the latter part of October with her daughter, Mrs. J. F. Magee, of this city. She expressed herself as pleased to be able to confirm Mr. Magee's glowing description of our climate, finding it ideal at this season, as well as last March, when she was last here, despite the fact that climatic conditions are likely to be quite trying in the East at these times.

Nature is economical. She puts her lights and darks only where she needs them. Don't try to be more skilful than she is.—Hunt.

The Flashlight In The Studio

By Thomas Southworth

Illustrated by the Author

The machine which Mr. Southworth describes is his own improvement on the Filson Cabinet, which is now, in a much improved form, known as the Victor Cabinet, manufactured and sold by James H. Smith & Sons Company, of Chicago. Mr. Southworth lays considerable stress upon the advantage of being able to use daylight from his skylight through his form of machine. Taking up the matter with a local user of a flashlight cabinet, that gentleman seems of the opinion that a cabinet having a solid back and permanent cloth front would be more advantageous, inasmuch as it would be impossible for smoke to escape into the room; and, being somewhat smaller and much more portable, the cabinet could be moved about in preference to changing the position of the sitter for different effects, and could be instantly moved aside when the skylight was used. In addition, a smaller and more portable cabinet would produce less smoke, and require less powder for each negative made. However, these are minor matters to be determined by the individual user. We call attention to this point to the end that the reader will the better understand that the vital part of Mr. Southworth's splendid article lies in the strong case that he makes out for the flashlight as a power in the hands of the professional portrait photographer. In concluding the article he asks that those who are interested and desire further information will please address their communications to the firm mentioned above, and not to him, as they have full knowledge of his system, and will be pleased to give prospective or present users of the flash any and all possible information. We have thought best to insert his request here, leaving it off the end of his excellent article.

AN EVERYDAY FLASHLIGHT EFFECT.

RESPONDING to the request of the editor of "Camera Craft" for an article on the above subject, I feel that I am forced to venture into new paths. Were it not for the fact that I happen to be the only photographer in the country possessing the particular kind of machine of which I write, I would refer the matter on to some one else who could handle it better, as literary work is very much out of my line. But, realizing the value of the machine, and the utility of the flashlight, I wish others to know about them, and perhaps absorb some of my own enthusiasm. For many years there has been, in the photographic profession, a great need for the very article I am about to describe: For many years past I have yearned for such a machine myself. No doubt others have felt the same want. Hence, now that I have the very thing that my caption describes, I am only

too willing to tell others the good news. It will be noticed that I speak of my machine as a "practical" one; and this because I believe it is the only thoroughly practical flashlight machine for strictly studio use. This sounds like a big claim, but I leave the reader to judge as to its justness.

At the outset I hasten to explain that there is little in my method that I can claim as original. Ideas gleaned from several of my friends I have utilized in the perfected arrangement I now have in use. I have improved on some of these ideas, tearing down, discarding and remodelling, incorporating them in my present outfit. Furthermore, I must explain that the foundation of my efforts was the machine now known as the Victor Flash Cabinet, placed on the market about two years ago by Mr. Filson, an Ohio photographer. This system is fully utilized in the one I now have in use; hence the reader who is familiar with the Victor Cabinet will understand that it, with the improvements added, is the machine described in this paper. To my mind, one of the most valuable and important additions to the photographer's equipment, made in the last decade, is the Filson Cabinet. I, for one, am grateful to that gentleman for this valuable accessory.

My first illustration shows the machine standing in front of my skylight. It is a flashlight, made at night, to better show the interior arrangement. It will be noticed that I have an arm in my machine which can be brought forward for night use, this arm holding eight forty-candle power Tantelem lamps that make a very good focussing light. But if these lights alone were used for the sitter's "seeing light," the pupils of the sitter's eyes would be expanded beyond the normal and a stary expression would be the result. To overcome this I have an arc lamp placed close to the ceiling and well forward of the sitter. This additional illumination lights up the room beautifully, and causes the sitter to instinctively control the pupil of the eye to its natural size. For the purpose of emphasizing this point more thoroughly to those who have not given this matter much thought, I will ask you to call to mind how a person instinctively controls the pupil of the eye on a bright day when the snow is on the ground. The eye is then almost closed, and the pupil is contracted to its smallest point; let it be not so bright, and the eyelid is raised somewhat; then, let it be a gray day, the pupil is enlarged to about normal, and the eyelid is up. It naturally follows, it being a poor rule that doesn't work both ways, that since it is clearly proven by flashlights so taken, that the pupil of the eye is gradually expanded, reaching its maximum in total darkness, stary expressions are not caused by the flash, as it is impossible for any change to be made, in this regard, during the duration of the flash. The remedy is obvious. In the daytime, of course, I have a flood of soft white light throughout the room.

Our next illustration shows the machine as it appears in the daytime. Very little explanation should be required by the professional photographer to realize and understand its many points. We are all too familiar with the flashlight, its limitations and drawbacks not to understand the advantage of these things when we see them, yet lest some may not understand what they see in the illustration I will explain a few of the points that I consider might not be clear. It also shows the manner in which the machine is

utilized for daylight use, and it is this feature that I consider the most important improvement on the early design used by Mr. Filson during the four or five years previous to his placing it on the market. The greatest drawback to the original machine was the focussing arrangement; focussing being done by artificial light in the form of several high power incandescent electric lamps, adjusted so that they gave the same lighting as the flash, because below and near the flashpan. This point was a very nice one, in that it gave the operator some knowledge of what the resultant picture would be, as to direction of light. As the back of my original cabinet was closed up for the purpose of confining the smoke, no daylight from the skylight reached the sitter, making it rather difficult to get a good focus in quick time. I later installed an arc lamp immediately back of the flashpan and in line with where the flashpowder would be discharged. This was an improvement, but not so great as I had hoped for, as I still lacked sufficient illumination to enable me to easily and quickly perceive my opportunities with my young sitters; a very obvious drawback.

About this time a photographic friend in East Tennessee wrote me that

he was having trouble along this same line and proposed using a window back of the cabinet; thus utilizing daylight for focussing, but not in sufficient strength to play any active part in the exposure. This appealed to me so strongly that I commenced the construction of a new cabinet the same

night in which this idea was incorporated. The one illustrated, whilst of later construction, is essentially the same as the one just spoken of. It will be noticed that two diffusing curtains or screens, when pulled down, come between the flash and the sitter. To make the kind of negative I like, soft, delicate lightings, the addition of the inner curtain was found necessary. These curtains are both of India linen, fireproofed. I am presuming that the reader is aware that the smoke nuisance is entirely eliminated in this, as in Mr. Filson's arrangement; it making no difference how many discharges are made, or how quickly in succession, absolutely no concern need be felt about smoke, as none of it gets in the room. On the outside of back of cabinet is a curtain or shade of yellow domestic. This latter is pulled down over back of cabinet when making flashlight sittings, when the daylight is strong, for the purpose of minimizing the danger of the daylight having any material action on the plate after the discharge of the flash and before the shutter has had time to close. Otherwise it is left up. It will be seen that three curtains are constantly in use, the one behind being yellow while the two diffusing curtains in front are white. All three are mounted on heavy tin rollers. My cabinet has a raising and lowering latitude of about two feet, is supported by a standard on heavy, easy working casters, and can be quickly pushed out of the way when desired. It is seldom, however, that I find it necessary to do this, as it was part of my plans to make my daylight sittings with light coming from the skylight right through the machine. Used in this manner I have an available skylight area of seven square feet right through the machine, none other reaching the sitter.

To make the change from a flash adjustment to a daylight arrangement, the releasing of the inner diffusing curtain and the yellow back curtain is all that is necessary, and change is made quicker than it can be told. The machine is kept charged at all times and the change from the one method to the other is made instantly. The next illustration shows position when daylight sitting was made for portrait therewith.

At this point it might be well to explain the shutter and electrical discharge arrangement. I use a "silent" studio shutter, adjusted inside the camera with electrical connections so arranged to the horizontal bar at the top that the circuit closes and sets off the flash when the shutter reaches the full open point. This does away with the use of a bulb with the contact points fastened to its side, and the annoyance of the rubber tubing continually getting tangled up with the electrical cord. A small arc is created inside the camera when the contact points come together, but this spark is easily kept from reaching the plate by a little cardboard shield fastened to the top of the shutter. This arrangement is far superior to anything I have yet seen, on account of its simplicity and the elimination of misfires.

What percentage of my sittings do I make with the flash, and with daylight, respectively? Anticipating this question I will say that for two years I have made all my baby, child and group sittings with the flash; adult sittings, when the light is good, by daylight through the machine. I am not so enthusiastic as some of Mr. Filson's followers about making every-

thing with the flash; I rather prefer to make my grown-up sittings by daylight, but when late or cloudy, I use the flash. When in doubt as to which method to use, and I seldom decide until I have posed and focussed, the only change to be made is the drawing of a curtain and the turning of an electric button.

I have often been asked if the noise does not frighten my younger sitters. My answer has been, that, whilst I have not kept count, I cannot call to mind more than two or three occasions when children have been startled to the extent of my not being able to make further exposures; and, in each

of these cases, I got my order from the one first negative. I find that children are often entertained, rather than startled, by the light and noise, and I am often asked by them to do it again for their amusement. I usually feel the most grateful to Mr. Filson along about the holiday season, when the days are so short and business is so brisk, and the mothers come strolling in a few minutes before sunset. No photographer need be reminded of the worry involved in the knowledge of certain under exposure, poor negatives, or possible loss of business by putting them off until the next day. But, thanks to Mr. Filson, the mothers can bring them in any sweet time they please, as many negatives can be made as you please, and made as quickly as you please. One can make the so-called Rembrandt, back and shadow lightings, or any other kind of lighting, and have fully ninety-five per cent good, first-class, fully timed, no movement, negatives.

And the cost? Mine has cost me one hundred dollars. I feel that a man who has any kind of a business at all, and who can realize the advantages, should care little or nothing about the cost. I use one level mustard spoonful of Victor powder with my lens at f-4, for the regular plain lightings. This is about ten grains by weight. My average flash, therefore, costs me not over one cent.

The distribution of the powder is rather a threadbare subject, but I feel that a brief comment thereon will not be untimely. Much powder is often wasted by lack of distribution when using large quantities in large halls and theatres. Experience has taught me that in making exposures of this kind, the maximum illumination is derived from a distribution of two feet for each ounce of powder. Beyond this point, some risk is run of slow combustion. When using smaller quantities than this, as in the studio where only two or three mustard spoonfuls are ever necessary, the difference in results is not so marked. However, I find it advisable to well distribute even small quantities, the noise not being so great. I have adopted the rule of using six inches for each mustard spoonful of powder. While there is not a marked difference between the results from maximum concentration and maximum distribution, with small charges, there is much difference in the report; and, in the studio it is well to see to this point. It has been claimed that six ounces of powder can be burned at one time, on a certain machine, the top of which is only about twelve inches wide. Quite true; it can be burned, but it is a great waste of powder. Half the quantity, strung out in the proportion named, six feet, would yield fully as well timed a negative.

Attention is here directed to the baby groups reproduced on another page. Surely, no comment is necessary. How many negatives would have to be made, in the ordinary way, to make certain of having secured an assortment of negatives out of which a seven or nine position baby group could be made? In the making of these negatives, every exposure was useable. These further testify to the speed at which the exposures can be made; the reloading being accomplished almost as quickly as the telling of it. Through the use of my machine I have gained the reputation of being an expert with children; people coming from points outside my ordinary territory to have the children's pictures made by me. I know of more instances

than one in which people have come to my studio, bringing children, from large cities where there are photographers very much my superior; coming for the purpose of securing some of my baby group pictures. Of course, these pictures can be made by daylight, provided the light is at its best and the child is not too active; but the undertaking is entirely too large a one to make it advisable to encourage such business. Without the flash, many

more exposures have to be made, and fewer action pictures can be secured.

This article is already too long to allow me to do justice to the superiority of the flash in the rendition of white draperies; and, also, the texture of drapery of all kinds. The fact that its aid is regularly invoked by men of national reputation, in the making of their convention pictures, stands out as one of the strongest endorsements that can be given the flash. Using the proper apparatus, all exposures are instantaneous ones; full exposure meaning simply the use of a little more powder. Certainly a great advantage over daylight in most cases.

A Plea For The Lantern

By W. K. Love

Illustrated by the Author

There are, no doubt, hundreds of readers of "Camera Craft" who could, with much pleasure and satisfaction to themselves and no small amount of gratification and enjoyment to their friends and acquaintances, take up lantern-slide work. The lantern has become a recognized necessity in all forms of educational work. For church, Sunday-school, and Y. M. C. A. work; in schools, colleges, and lodges; by chambers of commerce and promotion committees, it is found most useful. The almost universal application of electricity for lighting purposes makes it convenient to use; and as for those who believe that people soon tire of a lantern, I would refer them to the members of the church to which the writer belongs. In the home, part of an evening spent showing lantern slides of a vacation trip, gives an ideal form of entertainment. One can occasionally invite in the children of the neighborhood and find pleasure in their keen enjoyment of the slides. In fact, there is no end to the pleasure that can be derived from a collection of lantern slides and a lantern of fairly good quality.

Another way in which the lantern can be made very effective is in illustrating a graduate's essay. In this case, everything must be in perfect readiness before the exercises begin. It is best to arrange the program so that a song by the glee club will precede the essay to be illustrated. This gives the operator a chance to start his lamp and be ready the moment the lights are out.

A common mistake in using a lantern lies in trying to show too many slides. Twenty to forty are as many as any speaker can talk on during forty-five minutes or one hour, and that is as long as any one cares to look at lantern slides at one time. Ten feet is as large as the picture should be in any ordinary audience room, while twelve to fifteen feet is suitable for large halls. Pictures that are too large are very tiresome to the eye.

The material for the slides is found in penny pictures, in books, and in magazines. A good slide can be made from any good half-tone; not as good as can be made from a photograph, but still a good slide to illustrate some part of the speaker's discourse.

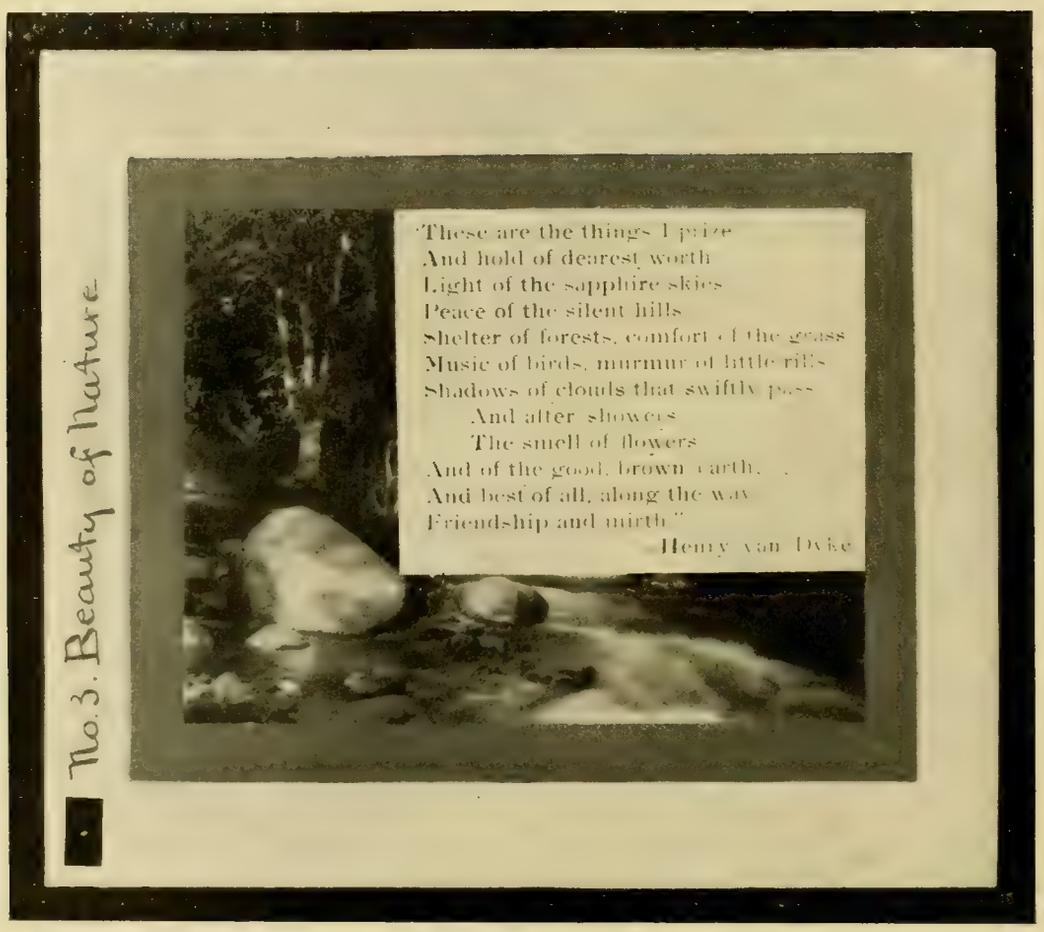
The making of lantern slides is work that will appeal to the amateur with more than snapshot experience. An expensive outfit is not necessary

A 5x7 or 5x8 camera, with a fairly long draw, and with a lens of about six or six and one-half-inch focus, is about all that is required. Use an Anastigmat lens if you have one; if not, a good rectilinear, stopped to U. S. 16 or U. S. 32, will generally give sufficient sharpness in copying. A reversible back to the camera is a great convenience in making copies from books. If the camera has a swing back, care must be taken to see that it is not out of square. Also, never turn the camera from one side to the other to center copy; or distortion will be caused. The camera should be screwed tightly to a board about four or five feet long. Nail cleats on the sides of the board for the easel to slide back and forth on; and at all times keep the easel square, that is, parallel with the ground glass. Use a piece of plate glass in front of what is being copied, bringing a pressure to bear on the glass, by means of clamps, so that the copy is pressed flat and free from wrinkles.

Use a window having a north exposure or one on the opposite side of the house from the sun. Incline the board carrying the camera so that the easel is several inches lower than the camera, and turn it at an angle of twenty to thirty degrees to the window. This will give a lighting that will overcome the grain of the paper. Care must also be taken that there be no reflections appearing on the glass covering the subject. If they appear, a slight change of position will generally destroy them.

A square, $2\frac{1}{8}$x$2\frac{7}{8}$, should be marked in the center of the ground glass, outline for the proper size of the negative for making slides by contact. Use any $3\frac{1}{4}$x$4\frac{1}{4}$ plate that will give sufficient density. In making copies of hymns, readings, or maps, use a lantern slide plate, stop down to U. S. 64, and give it plenty of time, giving about four times the exposure required for a Seed 26X. In developing, use enough bromide to keep the shadows clear. Elmendorf's "How to Make and Color Lantern

Slides," and "Photo-Miniature," No. 9, will give any beginner all the help needed. Beginners should use the formulas given by the makers of the plates until they become familiar with the making of slides. After that they can experiment more safely, knowing the behavior of at least one developer. In my own work I have used the same developer for ten years. Elmendorf's advice is: "One plate, one developer, one light, and one distance from the light, and never change." To which may be added, keep your trays and hands perfectly clean.

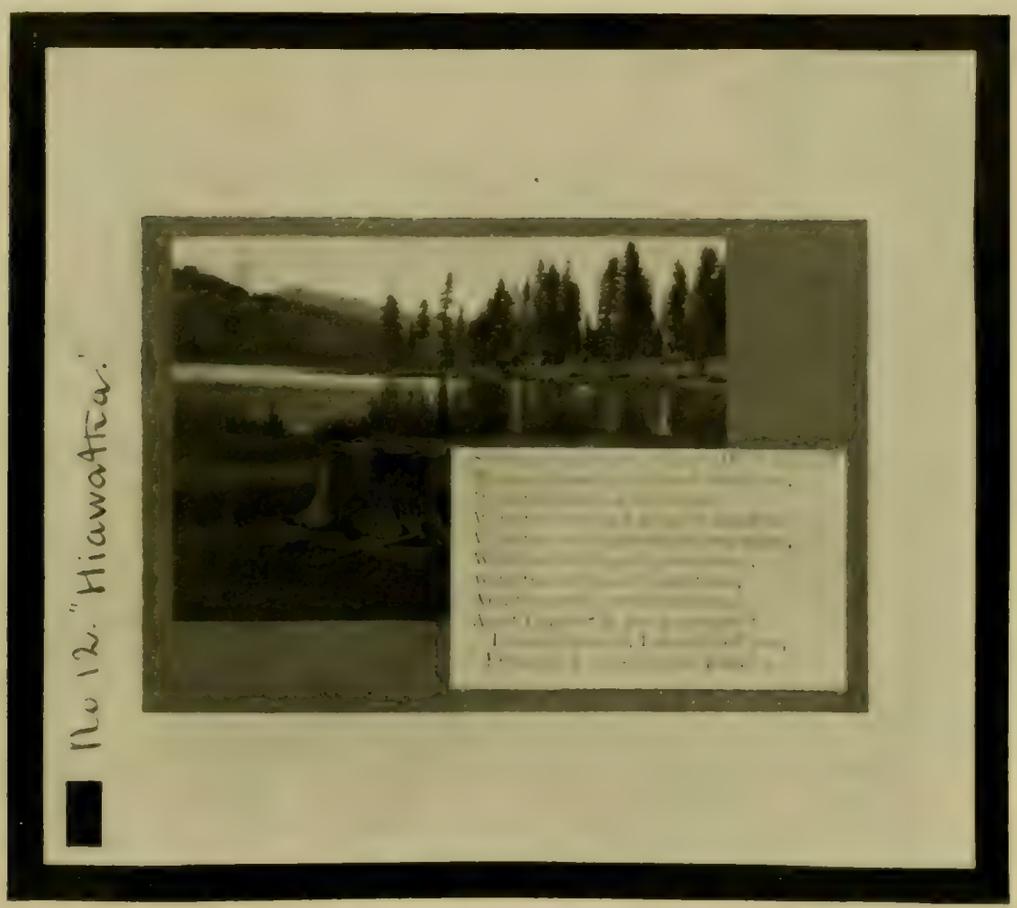

No. 3. Beauty of Nature
These are the things I prize
And hold of dearest worth
Light of the sapphire skies
Peace of the silent hills
Shelter of forests, comfort of the grass
Music of birds, murmur of little rills
Shadows of clouds that swiftly pass
And after showers
The smell of flowers
And of the good, brown earth, . .
And best of all, along the way
Friendship and mirth"
Henry van Dyke

TYPE MATTER AND PHOTOGRAPH COMBINED.

Ten years ago we began using a lantern for church and Sunday-school work; we have already started to use it for the coming winter, and every one is as enthusiastic over it as ever. We purchased the best lantern we could find; the slides are all made to fit the pastor's subject, hymns, Scripture readings, and maps. One cannot make a talk fit the slides and talk with as much freedom as he can when the subject is first selected and the slides made especially therefor.

In addition to a good lantern, we had an excellent electric signal that increases the effectiveness of the work. This is attached at the cut-out the same as the wires for the lantern, using about one hundred feet of cord, with a push button at the speaker's end and a two-candlepower lamp at the lantern. This gives the operator an instantaneous and a noiseless signal. The lantern is generally used on week-day evenings, although we sometimes use it for the Sunday evening service. The subjects are Bible and

church history, missionary talks, travel talks, and like topics; generally by the pastor, but sometimes by one of the congregation. Once the pastor went abroad, visiting, among other places, the Holy Land, and this gave him material for over a year's talks, as we seldom had them oftener than once a month. We still continue as we began, having new slides for every talk. It was not long before pressing invitations were received to give these talks in other churches. The pastor and lantern operator responded whenever they could, no charge being made. Today, several other churches in our



ANOTHER EXAMPLE MADE BY COPYING.

city have, and regularly use, lanterns of their own, as also does the local Young Men's Christian Association. In addition to using the lantern in our own church, it is used regularly in a chapel supported thereby, and also at the Sherman Institute, the Government Indian School, where between five and six hundred Indian boys and girls have, through it, been interested and instructed to no small extent.

Saving Those Over-Exposed Prints

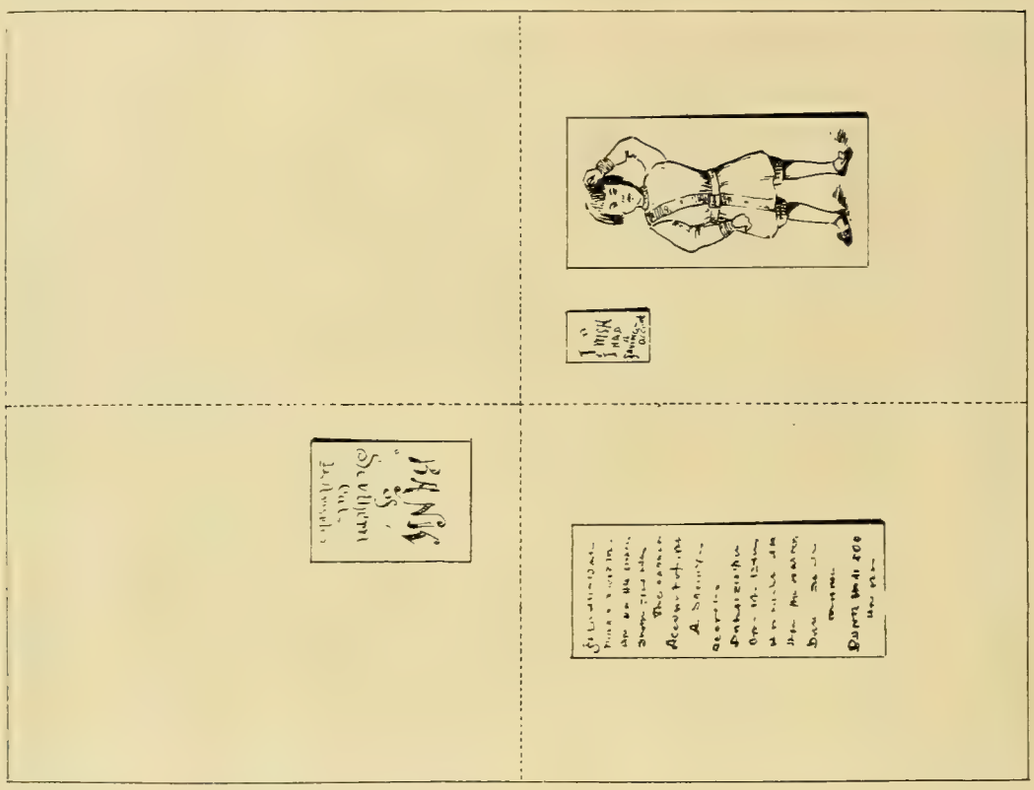
Errata: In the article on page 402 of the last issue was given a formula for a reducer, that, by mistake, was made to read, two ounces of potassium cyanide, instead of the half ounce as indicated in Mr. Church's original manuscript. Rightly mixed, the formula reduces prints about one shade in twenty seconds.

Some Photographic Advertising

By E. W. Harvey

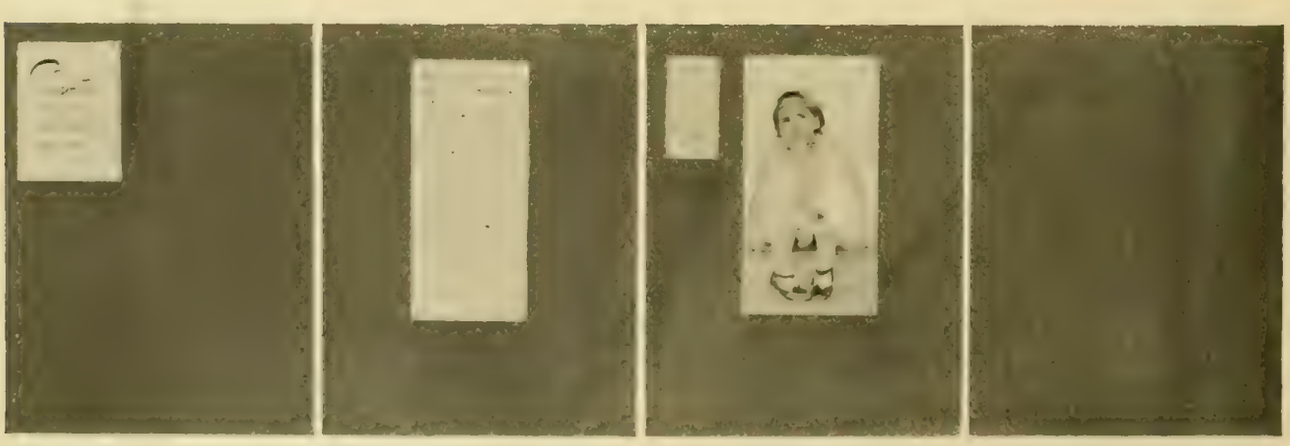
The editor has asked me to write a few lines concerning the photographic congratulation card that I sent him recently and which he wishes to reproduce for the benefit of other readers.

All that I can say is that it is entirely photographic, the wording being printed from a negative made by copying the lettering done on a large white card. The portrait being from one of my many child subjects. I think the idea is new and novel, and as far as I know, original; as I have never seen



THE WHOLE SHEET OPENED OUT FLAT.

anything just like it. From ideas taken from "Camera Craft," I decided that an advertising scheme of the kind could be made a source of revenue, so took up the matter as a side line. I have gotten out a large number of them for the local bank and the management seem to be pleased with the results of sending them out. They are attractive and right to the point, the recipient



SHOWING THE FOUR PAGES IN CONSECUTIVE ORDER.

getting the idea at a glance. They are pretty sure to be preserved, and it is not at all unlikely that each one sent out will be read by from five to ten different people. A sheet of ordinary cover paper makes four of the folders and another sheet makes four envelopes to match. The four small prints can all be made on a sheet of paper cabinet size. I furnish them to the bank for seven dollars and fifty cents per hundred, all ready for mailing, with a liberal discount for five and ten hundred lots.

[Mr. Harvey's address is 1614 Twenty-second Street, Superior, Wisconsin, should any of our readers have use for his work or desire further information —Editor "Camera Craft."]

APPLES. By J. W. SCHULER.

Golden Wedding of a Pioneer

The celebration of the golden wedding of Mr. and Mrs. Thomas Houseworth, of 1260 Second Avenue, took place at the residence of their son, Harrison Houseworth, 2672 Filbert street, Sunday, October 23d. Mr. Houseworth is a California pioneer, and a pioneer photographer; more, he is a photographer who earned for himself a reputation in his chosen line that was accorded to but few in his time. The editor has a vivid recollection of seeing advertisements of Houseworth's views and reproductions of famous paintings in many of the leading journals of twenty-five years ago; and, of admiring the fine portrait work displayed in his cases at even a later date. The anniversary celebrates not only the fiftieth year of their wedded life, but the same number of years' residence in California, as the happy pair came directly to San Francisco after the wedding in New York fifty years ago. To say that they have the best wishes of a host of friends is as unnecessary as the words are unequal to expressing the esteem and regard which is theirs.

Inexpensive Calendars

By W. K. Love

to secure harmony of color, quite effective.

I am sending a calendar such as I made for my young lady friends last year. Being an old bachelor, you can see that I can have a lot of young lady acquaintances that must be remembered at this season of the year. As you will see, the whole thing is in different tones of sepia; and, perhaps, will not reproduce very well. However, it may interest some readers of "Camera Craft," and really needs no explanation. The base is a piece of heavy strawboard, this is covered with a piece of suitable cover paper, and a different shade of sepia used to give the edging effect—the same as a passe partout binding. This makes the mount for the picture, also in sepia; and the little calendar pads are for sale by all art dealers, printed in brown ink as well as in black. A couple of Dennison hangers, the kind that carry a small ring, are gummed to the back and a silk cord passed through and tied in a bowknot. This last is not shown in the reproduction. This one sent is only one of the many shapes in which they were made, some of them being nearer square, while a few were long, horizontal panels. They are quite easy to make, and if a little care is taken At any rate, they seem to have been appreciated by the recipients.

Camera Craft

A PHOTOGRAPHIC MONTHLY

VOL. XVII. SAN FRANCISCO, CALIFORNIA, DECEMBER, 1910. No. 12

More "Shop Talk."

Those two little talks in the last two issues seem to have struck a responsive chord, rather, a large number of them, judging by the kindly letters received. And that is our excuse for inflicting still more of them upon our readers. The flood of letters has been so great that a large number will be waiting for an answer a little longer than we would like. We will get around to answering all of them, and are only too glad that there are so many. But there is a suggestion made by several that we would like to talk over, and that was, that we should provide more reading matter suitable to the wants of the raw recruit to the photographic ranks. The reason why we do not devote more space to such matter is simply this: There are dozens of inexpensive manuals, ranging from excellent booklets gotten out and distributed free of cost by the manufacturers of plates, paper and the like, to those sold by almost all stock houses from twenty-five cents up to a dollar; and they practically cover the field. And such information, being provided in a complete and separate book, has much more value than would a like amount of information contributed by a number of different writers scattered through a number of our issues in a more or less disjointed manner. These elementary manuals can be likened to instruction received from a teacher; the more pretentious books on photography to a studied lecture by an authority; while the photographic magazine, as we see it, should resemble more nearly that form of instruction and entertainment one would expect to derive from forming one of a gathering of congenial spirits who met each month for mutual encouragement and assistance. In our capacity as editor, we are simply acting as toastmaster; encouraging those capable of imparting information to come forward, and doing what we can to make the monthly meeting worth your while attending. It is not with our province to play the school master; neither is our place to impose an exhaustive exposition of any given subject upon the whole assemblage for the benefit of the few interested therein. This man's methods, that man's experience, another's theories, an occasional quotation, even a little nonsense at rare intervals; all these should be capable of making it unnecessary to invade the field of the elementary book of instruction or the exhaustive treatise on special subjects. We know the beginner has his questions to ask, and they are gladly answered. We know the more advanced worker has questions that may perhaps seem amateurish, but this is but natural with a subject with so many ramifications as photography. We do not want to discourage our readers from coming to us on every possible occasion because we have mentioned these available sources of

information. They are not always at hand and they are sometimes a little obscure on certain points. And, above all, we do not wish to limit in the least any inclination our readers may have to make suggestions as to how we can improve the magazine and make it more to their liking. You can realize, if you will but stop and think a moment, that it is impossible for us to know what our readers want if we do not hear from them on the subject. Not hearing from them, we can only guess; and guessing is neither a satisfactory nor profitable occupation.

An Interesting Exhibition

At the time of writing this, the Los Angeles Camera Club is holding its Second Annual Exhibition, and, judging from the handsome little catalogue and the press clippings received, the display is proving a most successful one. There are shown some sixty pictures by members of the club and about an equal number in the form of a loan collection from the Amateur Photographic Society of Amsterdam, Holland. The latter, in addition to its variety of subjects and treatment, possesses an added interest and educational value in showing, as it does, both the selected and rejected pictures of a set submitted to the last American Salon jury. The worker who aspires to salon honors can learn much from these pictures. He has before him a most varied collection of good work by the members of a society of considerable note, about one-fourth of which were adjudged worthy of acceptance by the jury. He has but to ask himself why a certain picture was accepted and others rejected, in order to gauge his own appreciation of what a typical jury of selection finds worthy. We would add that this collection of prints has, through the kindness of our Holland friends, been placed in our own hands as available to camera clubs throughout the Western States. Such clubs, desiring the loan of the set, will please advise us at once so that routings may be arranged.

A Stereoscopic Exhibition

Commencing with the next, the January issue, we will devote a page or more to articles and items of interest to stereoscopic workers, these to be contributed by the active members of the stereoscopic division of the International Photographic Association, and such other of our readers as may favor us. The several interesting articles on stereoscopic work, that we have published recently, have elicited so much favorable comment that we desire to cater still further to what seems to be an increasing interest in this delightful branch of photography. Mr. Wilson, under whose directorship the division above mentioned has become quite popular, will assume the responsibility of inciting the members to use their pens in promoting interest in stereoscopic work through the medium of this new department. We feel quite sure that such able workers will have no trouble in writing in a most interesting and informative way on a branch of photography which they pursue so successfully.

A Photographic Digest

Edited by H. D'ARCY POWER, M. D., Burlingame, California

TONING WITH GOLD AND PLATINUM.

Professor R. Namias has examined prints made on print-out paper and toned with gold or platinum, or both, with the object of discovering the amount of substitution by the precious metal which actually takes place. The experiments are still in progress, but the following is an abstract of the results so far obtained.

In all experiments the following method was adopted: The print, after toning and fixing, was placed in a very strong solution of copper chloride, and thence transferred to one of hypo. By this means the whole of the silver is dissolved, whilst the gold or platinum produced in the toning is left. Thus, by comparing the intensity of the print after treatment with that of the original, an idea was obtained of the effect of the different toning formulae on the various papers examined.

The following conclusions were arrived at:

1. The quantity of gold deposited on print-out papers when toning thoroughly with a separate bath varies according to the vehicle of the sensitive salt, gelatine, albumen, or collodion.

2. In each class of papers certain formulae give better toning results than others

3. If the toning with gold is done before fixation, the quantity of gold deposited is, as a rule, proportional to the quantity of silver in the image of the print.

4. If toning is done at the same time as fixing (combined bath), using the best formulae, containing a fairly large quantity of gold, the image is usually very weak, but in many cases, on the other hand, the deposition of gold is fairly proportional to the original image. The half tones are almost removed, whilst the deepest shadows retain their depth.

5. The toning of prints which have previously been fixed is not only a possible process, but gives deposits of gold to a greater extent than in the two preceding cases. For this form of toning, however, the acidified sulphocyanide bath worked out by the author during 1909 must be used. This form of toning gives prints of fine black tones and of great permanence.

6. The deposition of platinum in matt papers, which are amenable to this method, usually takes place in a way proportional to the silver in the image. After elimination of the silver, the platinum image which remains is usually stronger than that when employing gold toning. Toning with both gold and platinum gives results which are not comparable to those given by toning with gold alone.

7. Development papers (bromide or chloro-bromide) are readily amenable to gold toning when using a bath of gold and sulphocyanide rendered acid. In this case the tone obtained tends towards blue. Considerable deposition of gold takes place, and, after removing the silver, a strong image remains, particularly with chloro-bromide papers. It would seem that this is the only process of obtaining fairly strong images consisting entirely of gold.

8. Toning with platinum proceeds very differently with bromide of chloro-bromide papers. With bromide papers practically no deposit of platinum is obtained, whilst a slight deposit is secured in the case of chloro-bromide prints.—International Congress of Photography, *vide* "British Journal of Photography."

PRINTS IN TWO COLORS.

The appreciation of the fact that two colors properly used are able to satisfactorily supply the whole scale is further shown by a contribution of R. M. Morcels to the Belgium Photographic Association and reported by the "British Journal of Photography." It will be remembered that the production of colored

cinematograph films is thus carried out. My own process of producing bromides in two colors, while quite different in method, is based on the same idea. Mr. Moreels' method, here given, might very well be used with a combination of dyes of a more subdued character than those recommended. The paper reads as follows:

The following process is not simply a method of two-color printing—to call it so would be to discredit it—but is a process of printing in two colors approximately the complementary of each other from two negatives taken at the same time, or in quick succession, and recording, on one of them, a color sensation the complementary of that recorded by the other. Working in this way, the process allows of certain excellent effects being produced, not of detail in colors, but of the colors which are predominant in the subject.

In landscape work, the principal color, of course, is green, and there is no objection to recording this color on one of the pair of prints rather than producing it by the combination of a yellow and blue. On the contrary, in this latter case the green will be too dark, and the lack of red in the print as a whole will not allow of the greys and blacks being produced. And, moreover, no great harm is done in neglecting to record the yellow—which occurs very little in nature. Even the blue is not indispensable: the sky itself is rarely a full blue. And as regards a truthful impression on the eye, the rendering of a sky, which is not of exceptional deep blue tint, is not greatly false if done in grey. We may, therefore, take green for one of the prints and the complementary color red for the other. In this way the tones of green, light or dark, are given to the foliage, the trunks of trees are rendered in their proper browns and blacks with greenish reflections, the roads are likewise rendered brown, and the sky grey, whilst in such a landscape one can provide for white cottages with green shutters at the windows and red roofs.

On the other hand, while green is the principal color in landscape, its complementary, red, is the chief color in portraiture, and thus the same screens and colors serve for both classes of work, excepting in the case of sitters with blue eyes and hair of a very light blond.

For the negative which is to be printed in green, a panchromatic plate or a Lumiere Ortho plate, series B, is used. This plate is exposed in the dark-slide through a red screen, whilst for the negative to be printed in red we use a panchromatic plate or the Lumiere Ortho A plate through a yellow screen. The negatives may be taken simultaneously by means of a special apparatus, in which a panchromatic red-sensitive plate is placed in the usual position and a Lumiere A plate in a plane perpendicular to it and behind a yellow screen. A red screen is used in a plane bisecting the angle between the two plates. This red screen absorbs all the rays (except the red) which reach it, these latter acting on the plate at the back of the camera. The front surface of the red screen reflects the whole image, and the yellow screen cuts out the violet rays, diminishes the action of the blue, so that the Lumiere A plate, which is not sensitive to red, records the whole of the green.

It is true that in place of using a plane-parallel red screen an ordinary transparent mirror with two parallel-plane surfaces might be employed, and the red screen placed at the back of the apparatus. But the reflected image would then show double outlines, owing to reflection from the back of the glass. The red reflecting screen avoids these double outlines by cutting out all the rays which are reflected from the back surface, excepting only the red, to which, as we have said, the Lumiere A plate is not sensitive. Also, the red screen calling for a considerably longer exposure than the yellow screen, the use of the former as a reflector acts as an equalizer of these times. The use of the red screen as a reflector causes a linear reversal of one of the negatives, but this is an advantage in preparing prints on glass by the hydrotype method to be described, or on paper by the carbon process. In the latter case the red print, taken from the reversed negative, is brought upon single transfer paper, and after development re-reversed. The green print is developed on a temporary support, and then trans-

ferred to the first with aid of a tepid solution of gelatine.

In making the print on glass two transparencies are printed; a transparency is printed from each of the two negatives, in each case of full detail, but thin density. The negatives being reversed as regards each other, the positive transparencies therefrom are also reversed, and, therefore, may be bound up together film to film after having been dyed, one red, the other green.

If the two negatives be taken in succession in an ordinary camera, so that there is no reversal of either, a transparency on glass is made from one in the ordinary way, and a positive printed from the other on a stripping film. Two transparency plates are fixed, washed and dried, and are sensitized for four minutes in a four per cent. solution of potassium bichromate, and are then dried in the dark. These two plates are printed behind the positive transparencies by daylight, continuing the exposure until the image commences to show as a brown negative on a yellow ground, or better, by means of an actinometer, as used in ordinary carbon work. To avoid any mixing of the negatives, the plate exposed behind the red screen, and to be printed in green, should be marked with a G in one corner with a penknife. The two bichromated and exposed plates are washed for a quarter of an hour in three or four changes of water until the yellow color is removed. Then the brownish negative image which remains is cleared away by placing the plate for one-half to one minute in a five per cent solution of potassium metabisulphite, again washing for half an hour in several changes of water.

After this they are ready to be dyed with their respective colors—namely carmine (with ammonia), fuchsine, or eosine for the red. Picric acid for a pichrate salt, together with Prussian blue or aniline blue for the green. After having tried many combinations of dyes, I have found that the carmine with ammonium gives the finest results for the red, and is best employed with a solution of methylene blue and auramine O for the green.

The plate to be dyed red is placed in a deep red bath of the carmine made up with ammonia until the whites acquire a slight rose tint, after which it is washed and dried. The other (G) plate is first dried, then dipped into a solution of methylene blue in water to which is added enough auramine O to give it a slightly yellowish-green tint. When judged to be sufficiently dyed, it is given a brief rinse under a spray, allowed to drain, the excess of moisture mopped off with a fine cambric linen, and the transparency put back to back against that dyed red in order to judge of the total effect. If the predominant effect is red, the green print is put to dry, and the red reduced somewhat in water to which is added a fair proportion of ammonia. But if there is too much green, both in the shadows and high-lights, the red print is further soaked in the ammonia solution of carmine. If the green is the overpowering color, particularly in the high-lights, the red print is dipped in water slightly tinted with eosine or ordinary red ink. The two plates having thus been adjusted and dried, a little white wax is applied to the gelatine surface in the four corners of one of them in order to facilitate and to fix the registration and to fix them in register. It then only remains to bind the two glasses together after the manner of an ordinary lantern-slide.

The transparencies made in this way have the transparency of ordinary lantern-slides; they are without grain, and show the finest detail even in the shadows. Flesh tints are particularly well rendered, owing to the auramine penetrating into the high-lights more easily than does the methylene blue. With a little practice, and some experiment in varying the colors of the screens and of the dye baths, it is possible to render colors other than red and green without prejudice to these latter, and while still preserving the whites, blacks, and greys of sufficient purity. The process thus possesses a latitude which makes amends for its scientific inferiority to the regular three-color methods and causes it to excel these latter by its simplicity and the artistic merit of the results to be obtained with it.

THE AMBIGUITY OF RADIOGRAPHS.

Those who work with the X-rays have good reason to know that although they are a valuable means of finding out whether a certain object is embedded in a mass, such as a needle in the flesh, this good point is rather counterbalanced by the fact that they afford so little indication as to the exact site of the particular object they so faithfully represent. An interesting communication on this subject was brought before a recent meeting of the Röntgen Society by Dr. William Cotton, who showed that for every X-ray representation there were at least two graphic possibilities. So confusing, indeed, is the radiograph, that it might almost be termed an optical illusion. Dr. Cotton brought forward a new method of finding out the distance of any opaque object which is radiographed through a mass of material transparent to the rays. It is a very simple method, and one which any worker with the X-rays can test for himself. He makes a stereoscopic double exposure of the foreign body on a single plate, then in a darkened room sets up the developed negative with the two images of the foreign body upon it, and at a distance from it exactly equal to that which separated the plate from the X-ray center of emission when the exposure was made, he places two night-lights. Then in the path of the flames he hangs a small opaque sphere by a piece of string, and it follows of necessity that when the center of each visible shadow of the sphere falls over the center of the respective X-ray shadow of the foreign body on the plate, the sphere itself is at the point actually occupied by the foreign body in reference to the plate at the time of taking. The rest is a mere matter of measurement.—"Amateur Photography."

ANOTHER PLAN OF LOCAL REDUCTION AND INTENSIFICATION.

I have locally treated a number of negatives, writes Donald McLeish in "Photography and Focus," by the process described below, with invariable success.

Should any considerable part of a negative be much thinner than the remainder, the thin part may be gone over on the film side with a brush and a tube of india rubber solution, carefully following the contours and applying a thick coating. The negative can then be soaked and immersed in a ferricyanide reducer, which will only act on the unprotected portion. When this is sufficiently reduced the negative may be washed and rubbed with cotton wool without affecting in the slightest degree the rubber film, which, when the negative is again dry, can be gently rubbed with the finger-tip, when it will roll up and come away, leaving the film underneath in its original condition. The reducer in this process never creeps under the edge of the rubber film, as is the case with other protective agents.

THE MUDDY ROAD By BENJ. W. DOUGLASS

The Amateur and His Troubles

Conducted by FAYETTE J. CLUTE

A FIVE SECOND DEVELOPER.

A reader in Ohio asks for the formula that was published some ten years ago as recommended by Mr. Henderson of England for rapid development. We would not like to say that the developer was specially recommended, but it was put forward by Mr. Henderson as having all that could be asked for in the matter of rapidity of working, he developing a plate exposed behind a Warnerke sensitometer to full printing density in five seconds. The report says that the negative possessed excellent gradation and gave a reading of fifteen. The formula is as follows:

A:	Hydroquinone	20 grains
	Metol	20 grains
	Audurol	40 grains
	Sodium sulphite	1 ounce
	Water	8 ounces
B:	Potassium bromide	10 grains
	Sodium hydrate	120 grains
	Water	8 ounces

For use take equal parts of each. Mr. Henderson advised that he did not recommend the formula for general development, but believed that it would be found exceedingly useful where a large number of negatives of like subject were to be produced for commercial purposes.

IMPURE SODIUM SULPHITE.

A Kansas subscriber is partial to amidol as a developer for his gas light and bromide prints; but he has troubles from time to time, and these he believes are due to impure sulphite of soda. He wants to know how he may test different samples. Until he is familiar with the action it would be best to try the doubtful sample against one that he knows to be satisfactory. Let him dissolve an equal amount of each in equal amounts of water, say twenty grains of each sulphite in two different ounces of water. Then add to each solution an excess of barium chloride solution, which will throw down precipitates of barium sulphite and sulphate; the latter being quite small in amount in proportion to the former, if the sulphite is quite pure. If hydrochloric acid is then added, the barium sulphite will be redissolved, leaving the barium sulphate behind, and the amount of this will show the relative purity of the two samples; the more sulphate, of course, the less pure the original sample of sulphite really was.

CALCIUM CHLORIDE.

An Oregon correspondent complains that he cannot obtain a calcium chloride that looks like the article supplied in a preserving tube which he bought some years ago. The reason is, the article which came in his tube was, no doubt, a mixture of the chloride with asbestos fiber. He can easily prepare it by taking the calcium chloride of the druggist and mixing with it the very little water required to make a saturated solution, and into this mixing ordinary coarse asbestos until it is of the consistency of stiff dough. Then knead the mass well, break it up into little cakes of a convenient size to fit the storage tubes, place in a tin and bake until hard. Such as is not used in the tube will have to be stored in a wide-mouthed bottle with the cork well sealed. As the used cakes become moist, through absorbing dampness, take them out and again bake to remove the moisture.

PRINTING IN CLOUDS IN PLATINOTYPES.

A Maryland correspondent has had trouble in balancing the exposures for the two negatives in his platinotype printing when introducing clouds from a second negative. Perhaps the best way is to use an old dodge we saw a professional employ some years ago. He simply stuck a narrow strip of Solio to that end of his sheet of platinum paper that he could best afford to trim off after the print was made. When printing the cloud negative, the part where the landscape is to come is protected by a mask cut roughly to the outline, and kept moving to avoid a sharp

line of demarkation. The Solio strip acts as an actinometer and shows when the clouds are printed to the right depth. The platinum paper is then placed behind the landscape negative, the Solio strip still in position, and printing carried out in the same way until the landscape is printed to the proper depth to harmonize with the clouds, the strip of Solio again showing just when the proper exposure has been given. But one must bear in mind that there must be some degree of harmony between the two negatives. It is almost impossible to secure harmonious effects from a combination made up of an undertimed and brilliant landscape negative and a rather full timed and lifeless cloud negative. Even with the printing perfectly adjusted, the difference in the quality of the two negatives is inclined to produce a print that is lacking in its capacity to please.

ABOUT FINDING OUT.

I want our readers to ask questions, and I do not wish to discourage them in doing so. Neither do I wish to imply that any of the many questions asked are trivial, or that they appear so to me. But, for the benefit of those who cannot be induced to ask questions, preferring to work out matters for themselves, let me offer a little advice. If you have a difficulty and wish to discover the cause, go about it in a scientific, or rather, a systematic, way. Let us suppose that your prints on gas light paper come out with fogged high-lights. It may be the paper is at fault, the light in which the frame is filled or the paper developed may be too strong, or the developer may be at fault through lacking in bromide or other restrainer. Now, if you take a new package of paper, cut the light down to an unpleasant degree of darkness, and mix up a new developer with an additional amount of bromide, the prints will perhaps come out all that you can desire. But you did not lo cate the trouble; and besides, you have put aside some paper that may be perfectly good, you have handicapped yourself with a light that may be unnecessarily weak, and you may be using a developer that is restrained so far that it will develop only a few prints before giving greenish blacks. What you should have done was to have tested the paper first by mixing up a very small amount of a fresh, normal developer, and into it plunging an unexposed strip of the paper for the usual length of time required for development, doing this in a perfectly safe light. If the strip showed fog within this usual developing time, more bromide could be added and another strip tried. The amount of solution being small, waste is avoided and the addition of bromide necessary equally as apparent. But suppose the paper be not at fault, next try the light. Expose another strip of the paper to the developing light for a reasonable length of time, and then develop, again using a small quantity of fresh, normal developer. The light being found safe, the trouble evidently was in the developer used before the experiments were made. And this, of course, has been confirmed by the good results obtained with the new, normal developer. And the same method of procedure will generally locate most of the ordinary troubles. We, of course, feel flattered at the abiding trust in our knowledge displayed by the man who sends in a print with the high lights slightly fogged and asks us the reason for their being so, but we can only suggest a few of the possible causes. We have no sample of the paper to test, we have no knowledge of the conditions under which he is working, or of the composition of the developer he used. And this brings me naturally to a matter that seems to cause a great many workers considerable trouble; the amount of bromide that must be added to their developer for gas light paper in order to keep the whites clear, and yet not add enough to encourage the production of greenish tones. To determine just how much is needed, and the amount varies with the water in different locations and with different batches of paper, is quite easy. Prepare the required amount of developer and then take a strip of the unexposed paper and immerse one end in the developer, as it stands in the measure, for a little more than the time required for ordinary development of a print. If this produces fog, a little more bromide should be added and the test repeated. This tentative addition of bromide and corresponding test of a small strip will soon bring one to the point where the bromide necessary to keep the whites clear has been added, and little, if any, unnecessary amount used.

International Photographic Association

THE STEREO DIVISION.

The members of the Stereoscopic Division of the International Photographic Association are doing well; and, in some cases, displaying the proper interest and appreciation. But, on the other hand, there are members who are quite lax in the matter of sending in their prints for the circulating sets. To favor these last is simply to impose a hardship upon the prompt and loyal contributors, as well as to multiply the trouble and annoyance connected with getting out and keeping track of the circulating sets. The Director of the Division, Mr. Wilson, is giving his time and attention most effectively, but we cannot ask him to carry those on the route list who are not considerate enough to keep him supplied with their work for insertion in the sets. Will the ones who have been neglectful kindly give the matter attention? Send him a stereo portrait of yourself for the portrait set. Send a good supply of regular work. When the set reaches you, notify him promptly; comment on the slides on the sheets provided for that purpose; and, send the set along promptly. Now that the less busy months are here there can be, as a general rule, no excuse for negligence in any of these matters. If you cannot send prints, write Mr. Wilson and explain why. If you wish the sets routed to you, do not stop sending your slides. He will be fully justified in understanding that you do not wish to see the sets if you fail to contribute your share of the slides. If your name is dropped from the route list of the sets you will have no one to blame but yourself.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

Harry Gordon Wilson, Director Stereoscopic Division, 4954 Washington Ave., Chicago, Ill.

Charles M. Smythe, Director Post Card Division, 200 S. Marion St., Denver, Colo.

NEW MEMBERS.

2620X—Earl Whitford, Shelton, Nebr.
Class 2.

2621X—Melvin Bacon, Fredonia, Kans.
Wishes to exchange speed pictures and landscapes, for landscapes, etc. Class 1.

2622—Clarence L. O'Hara, Box 892, California, Pa.
Class 2.

2623—Forrest W. M. Bock, New Albin, Iowa.
Class 2.

2624—Andrew C. Weber, Box 22, Mt. Angel, Oregon.
5x7 and post cards, developing paper. Desire to exchange post cards and photos. Class 1.

2625—Dr. B. D. Howell, 54 Main St., Clinton, N. J.
3¼x4¼ to 8x10, various papers. Desire to exchange post cards, prints, etc., especially stereoscopic views. Class 1.

2626—G. A. Hawkins, 803 Victoria St., San Antonio, Texas.
All sizes of views, portraits, etc.; for the same. Class 1.

2627—Joseph Cohen, 719 E. Adams St., Syracuse, N. Y.
Class 3.

2628—W. H. Atchison, Box 215, Placerville, Cal.
3¼x5½, developing paper, of general views; for post cards. Class 1.

2629—Howard L. Roe, 7241 Finance St., Pittsburg, Pa.
4x5, various papers, of scenery and buildings; for the same. Class 1.

2630—R. Duncan McCrosky, 70 Cook Street, Akron, Ohio.
Class 3.

2631—Anna B. Darmstatter, Suite 17, No. 7426 Detroit Ave., Cleveland, Ohio.
3¼x4¼ and 3¼x5½, various papers, of views of Mexico, Washington, D. C., and Cleveland, Ohio; for miscellaneous views. Class 1.

2632—Charles Goodlet, Seventh Rozhestvensky, No. 4, St. Petersburg, Russia. Class 3.

2633—Lawrence Siebeneck, Ottawa, Ohio.
All sizes, developing papers, of portraiture and general view subjects; for portraits of children and ladies; also general view subjects. Class 1.

2634—C. Lefebvre, 797 St. Denis St., Montreal, Canada.
4x5 and 5x7. Class 1.

2635—Walter M. Lauffer, Box 312, Cardington, Ohio. Class 3.

2636—George J. Rhein, Box 57, Manchester, Wis.
5x7 or smaller, developing paper. Class 1.

2637—Ralph Minard, Orland, Cal.
3¼x5½, developing paper, of bridges, buildings and views; for the same, also monuments. Post cards only. Class 1.

2638—L. C. Barrett, 229 Bridge St., Baker City, Oregon.
3¼x5½, various papers, of anything I think will make a good picture. Post cards only. Class 1.

2639—George Paul Kettlewell, Calistoga, Cal.
Class 2.

2640—F. T. Soto, Gozos 6, Puebla, Pue., Mexico. Class 2.

2641—Dr. John G. Sheafer, 304 O. T. Johnson Bldg., Los Angeles, Cal.
3¼x5½ and 2½x4¼, developing paper, of beach, mountain and street scenes; also high-speed work with focal plane; for landscapes, sports and foreign views, unmounted and mailed in envelopes. Class 1.

2642—Fred C. Miller, 47 Grosetta Ave., Tucson, Ariz.
Class 2.

2643—Thos. Hearn, R. F. D. No. 5, Box 9, Kingsley, Iowa.
Class 3.

2644—L. Roy Frey, 739 Lincoln St., Reading, Pa.
3¼x5½, developing paper, of landscapes and general views; for general views and anything interesting in nature, unmounted prints only. Class 1.

2645—Hugo H. Schroder, Box 25, Bettendorf, Iowa.
3¼x5½, 4x5 and post cards, developing paper, of pictures of general interest; for the same. Class 1.

2646—O. Nakanishi, 2002 Union St., San Francisco, Cal.
Class 2.

2647—E. L. Davis, 498 Chamberlain St., Peterborough, Ont., Canada.
Class 2.

2648—E. A. Hawke, 56 Aylum St., Peterborough, Ont., Canada.
Class 2.

2649—Miss M. E. Hogan, 203 Tremont St., Rochester, N. Y.
Post cards, of miscellaneous subjects; for landscapes. Class 1.

2650—M. E. Merriman, Rose Lake, Idaho.
3¼x5½, various papers, of landscapes and children; for landscapes or pictures typical of locality. Class 1.

2651—Ellen Thornburgh, Box 66, Anthon, Iowa.
Cabinets to 8x10, developing paper, of views, groups and single figures; for views. Post cards only. Class 1.

2652—Harrison H. Leffler, 32 E. State St., Montpelier, Vt.
5x7, 2½x4¼ and post cards, developing papers, of miscellaneous subjects; for the same. Class 1.

2653—Jos. C. Finagin, Jr., Apartado 1, Ayutla, Jalisco, Mexico.
Class 2.

2654—J. M. Steven, 5004 Detroit St., Cleveland, Ohio.
3¼x5½, 5x7, 4x5 and 3¼x4¼, developing paper, of landscapes, portraits and views in general; for landscape or any scenery. Class 1.

2655—Mrs. V. H. Watson, Bernard, Maine.
Class 3.

2656—C. J. Myrick, Clarksville, Iowa.
4x5 and 5x7, developing paper, of views, landscapes, and scenery. Post cards only. Class 1.

2657—William George Grim, 739 Ritter St., Reading, Pa.
3¼x5½, developing and printing-out papers, of landscapes and general views; for the same. Post cards only. Class 1.

2658—John R. Koch, Lock Box 238, Hinton, W. Va.
3¼x5½ and 5x7, developing paper, of miscellaneous subjects and studies of scenery, animals, and persons; for the same. Class 1.

2659—A. E. Willcutt, Box 25, Swift River, Mass.
5x7 and smaller, developing paper; for landscapes, water scenes, and other scenes of interest. Mostly post cards. Class 1.

2660—Will R. Kubley, R. F. D. No. 11, Argos, Ind.
Post cards. Class 1.

2661—A. Dwight Hall, R. F. D. No. 7, Rockford, Ill.
Class 2.

2662X—Clarence A. Shedd, 224 W. 21st St., New York, N. Y.
Park views and city life, developing and printing-out papers. Post cards only. Class 1.

RENEWALS.

880X—C. E. Wenck, Farina, Ill.
4x5 prints and post cards; for scenery of all kinds and foreign views. Only good work desired. I receive and send on approval. Class 1.

1553X—George P. Morgan, 20 Pontcanna Road, Cardiff, England.
Post cards of old and historic views; for the same. Class 1.

1929—D. P. Church, Canton, N. Y.
Class 2. For photographic Christmas cards, good work. Class 1. Will give prompt attention.

2122X—Wm. C. McPhee, Route 2, Caseville, Mich.
Post cards, developing and printing-out papers, of lake views, farm scenes, and anything unusual or of special interest; for the same. Class 1.

2153—Mrs. Wm. E. Baker, Moriah Centre, N. Y.
Desire post cards of national interest; must be first-class work. Class 1.

2175X—R. H. Hedrick, 29th and Faraon Sts., St. Joseph, Mo.
Post cards only, all subjects. Class 1.

2191—O. L. Tonjum, Route 1, Box 14, Kenyon, Minn.
Class 2.

2269X—Carl Farnsworth, Litchfield, Neb.
Turns out only good work on post cards and wishes same in return. Class 1.

2281—John Shira, Mt. Bullion, Cal.
5x7 and post cards, developing paper, of miscellaneous subjects; for anything of interest. Class 1.

2530X—Ralph B. Kling, Palo, Mich.
Post cards, developing paper, of general landscapes; for the same. Class 1.

2605X—Orville Hills, 2313 No. 2nd Ave., St. Joseph, Mo.
Post cards, developing paper. Class 1.

CHANGES OF ADDRESS.

456—W. A. Fiske, 514 Talbot Ave., Ashmont, Mass.
(Was Putnam, Conn.)

1172—R. Weaser, Grovania, Pa.
(Was Chenango Forks, N. Y.)

1359—W. H. Emmett, Electric, Mont.
(Was Aldridge, Mont.)

2100—Mrs. R. E. Pennington, Care U. S. R. S., Prosser, Wash.
(Was North Yakima, Wash.)

2173—George M. Pease, Wellington, Ohio.
(Was Cleveland, Ohio.)

2210—Elgin Lessley, 150 E. 47th Place, Los Angeles, Cal.
(Was Colorado Springs, Colo.)

2219—M. O. Johnson, Jordan, Minn.
(Was Thor, Iowa.)

2233—George M. Brown, General Delivery, New Haven, Conn.
(Was George M. Brouen, 62 Orchard St., New Haven, Conn.)

2279—J. Satterlee, 47 Summit St., Nyack, N. Y.
(Was Yonkers, N. Y.)

2373—Mrs. George Nichols, Dinuba, Cal.
(Was Los Angeles, Cal.)

2504—Chas. H. Swanson, Company K, 22nd Infantry, Ft. Sam Houston, Texas.
(Was Fort Liscum, Alaska.)

2528—Marjorie R. Zoller, Judson St., Canton, N. Y.
(Was Fort Plain, N. Y.)

2557—G. E. Crane, 2930 E. Main St., Kansas City, Mo.
(Was Mt. Vernon, Wash.)

2582X—A. F. Willebrandt, Tempe, Ariz.
(Was Phoenix, Ariz.) Post cards of Western life and Western scenery. Class 1.

2591—Thos. Mandry, U. S. S. "Maryland," care Postmaster, San Francisco, Cal. (Was printed Thos. Mandy in October issue.)

2609—R. Fortuna, Wylam, Ala.
(Was Maben, Ala.)

WITHDRAWALS.

1896X—Roy J. Sawyer, 1564 Greenup St., Covington, Ky.
Owing to the misplacement of his record book, he may be in arrears to some of the members, but will make good any delinquency, if notified.

2137X—Guy A. Clumpner, R. F. D. No. 1, Republic, Wash.

2237—John A. Glassey, 109 Front St., Exeter, N. H.

2261—Richard P. Beale, Edmonds, Wash.

Club News and Notes

Club Secretaries and others will oblige by giving us reports for this Department.

PHOTOGRAPHING SAN FRANCISCO.

October 19th, 1901, the California Camera Club undertook to photograph San Francisco in one day. Nothing which the Club has undertaken during its existence resulted in wider publicity, and the success attending the effort on that occasion was very marked. Many of the members have expressed a desire that the Club set apart another day for photographing the new San Francisco.

The plan is this: A day is to be selected, say, in the latter part of October, on which the individual members of the Club, under the direction of a special committee to be chosen, will agree to photograph the entire city. The committee will divide the city into districts, one district to be assigned each member, and this member is to devote his time, during the day set apart, to securing as many photographs of interest as possible in his or her district, making not less than twelve exposures. Two prints from each good negative secured shall be given to the Club, at the earliest possible moment, for reproduction and for an exhibition to be made on the Club walls. It is also planned that the pictures secured on this occasion shall be made the basis of the next annual pay show of the Club, at which time an effort will be made to compare, pictorially, the old and the new San Francisco. Every member having any negative of San Francisco, made prior to the disaster of April 18th to 21st, 1906, is earnestly requested to furnish at least one print from each.

The President, in a circular letter to the members of the Club, earnestly requests their personal co-operation in this undertaking.

PHOTO-SECESSION EXHIBITION.

The last Photo-Secession Exhibition, which opened on February twenty-eighth and closed on March eighth, at the gallery, 291 Fifth Avenue, was of more than usual interest. It was composed of drawings, and photographs of paintings by Henri Matisse, an artist of rare power and originality. The gallery is nearly always occupied by an exhibition well worth a special effort to visit, and those from out of town would be wise to look in while in the city. The location is quite central and the gallery is open during exhibition dates from ten a. m. until six p. m. daily, Sundays excepted.

DETROIT CAMERA CLUB.

The first semi-annual meeting of the Detroit Camera Club was held at their Club rooms, 6 Adams Avenue West, on Tuesday, October fourth. Reports were read and officers were elected as follows: President, W. B. Wilcox; Vice-President, J. E. Scott; Secretary, C. J. Shower; Treasurer, Harold Collins. The advisability of making the dues fifty cents per month was readily approved; and the membership limit was fixed at fifty. The Club, although in existence only six months, has been steadfastly and enthusiastically working for better and more artistic results along photographic lines; the work entered in the competitions each month manifesting a higher standard of artistic photography at each consecutive competition.

TORONTO CAMERA CLUB.

The twenty-second annual statement of the Toronto Camera Club, just to hand, shows that enthusiastic organization to be in a most healthy and active state. The membership is now two hundred and two; there is a larger balance to the credit of the Club than ever before, and the equipment of the Club has been materially increased during the past year. The regular monthly announcement from the Secretary's desk shows that there is a continued interest manifested by the valuable and varied events provided for each Monday evening. The annual meeting is held the first Monday of the present month, when new officers will be elected.

Notes and Comment

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

SOMETHING ABOUT HYPO.

We must remember that hypo contains a large amount of sulphur. In fact, if we boil sulphur with a solution of sulphite of soda and then evaporate, the result will be hypo. When acetic acid is mixed with a solution of hypo it separates a portion of this sulphur and produces the well-known "milky" effect. The image in our plate or paper film is practically a metallic silver one, and this liberated milkiness combines with it to form sulphide of silver, which, in turn, indicates an unstable image. But, this excess of sulphur is inclined to combine with the undeveloped silver haloids that the hypo is fixing out, in preference to the developed metallic silver, and for that reason little ill effect results, as a rule. At the same time, a fixing bath so compounded that this free sulphur, indicated by the milkiness of its appearance, is absent, is to be preferred.

"THE LENS PART OF PHOTOGRAPHY."

A new book, to be issued December first, has the above title. It is written by R. D. Gray, an American lens maker of known reputation, with twenty-five years' practical experience in lens making from which to draw. No more capable man for the writing of such a book could be found in this country. In the book he has given the facts that are always in demand concerning the lens and the part it plays in photographic work, answering more questions concerning them than does any other book now obtainable. And there is not a word in the book that can be construed as an advertisement of any particular make of lens. It is published by Tennant & Ward, New York. The selling price is twenty-five cents. Hirsch & Kaiser, 218 Post Street, San Francisco, will have a supply at the earliest possible moment, and will be prepared to fill orders promptly by the time this reaches the eyes of our readers.

DEVELOPING BROWN TONES ON BROMIDE PAPER.

Make the following solutions:

A.—Tartrate of potassium	.....	20 grains
Borax (pure)	.....	5 grains
Water	.....	5 ounces
B.—Water	.....	5 ounces
Proto sulphate iron	.....	5 grains
Tartaric acid	.....	2 grains

Add the iron solution to the potassium borax solution (B to A), not the reverse.

This solution will remain clear for a long time if kept from action of the air in a well-stoppered bottle.

The image comes up slowly, but attains a fine intensity, and the deposit is of a rich, warm brown, suitable for tone of bromides or transparencies. After development place paper or plate in a weak acid bath, tartaric or acetic; fix in hypo of usual strength.—"Photography and Focus."

NEW RODENSTOCK CATALOG.

The new catalog of Rodenstock's lenses has just reached our hands from James Frank & Son, Augusta, Georgia. It has many handsome illustrations, and contains information of value concerning the speed and depth of focus of lenses, a subject about which one cannot know too much. Quoting from the introduction: "The Rodenstock Optical Works of Munchen is one of the famous optical industries of Germany. Rodenstock's photographic lenses are famous throughout Europe, and are new only to the American photographer. It has been the policy of Rodenstock to reach the photographer with lowest possible prices, and at the same time, maintain the reputation for manufacturing optical goods of most modern construction and of highest efficiency." Write the above named firm for one of these new catalogs.

"SKIOPTIKON EINFEHRUNG IN DIE PROLEKTIONSKUNST."

This is number four of Liesegang's "Photographischer Bucherschatz," numbers thirteen and fourteen of which we have mentioned in our last two issues. As a clear, complete, and concise exposition of the construction and operation of the several forms of projecting or optical lanterns now in general use, this monograph is entitled to high rank. The various kinds of illumination come in for most instructive consideration, and the author, G. Lettner, is evidently capable of speaking with more than ordinary authority on the subject which he has selected. The book is, of course, printed in German. It is published by Ed. Liesegang (M. Egger), Leipzig, Germany. Price 1.50 Marks, postpaid.

A NEW COLOR PLATE.

The Dufay Dioptichrome plate has appeared on the market and Essenhigh Corke, a well known and reliable worker, describes his experiences with it. Judging from these we have a probable advance on the autochrome, not in speed or correctness of color rendering, for in these matters the observer states that the two plates are about equal, but the resulting plate is much more transparent and brilliant than an autochrome; also the film is harder and more adherent. We therefore have in the Dioptichrome a plate that can be used in the lantern with ordinary illumination. This is what we would all like to have available, as the color plates so far placed at our disposal have hardly been satisfactory, in the lantern, owing to the density. We trust the new plate will reach this country at an early date, so that its merits may be tested.

EXPOSURES THAT ARE RIGHT.

The actinic quality of the light, during the present season, changes rapidly; and, in order to secure the best results for general out-door work or on dimly-lit subjects, a plate coated with an emulsion, speedy and isochromatic, is a desideratum. This excellent combination is found in the Imperial NF Plate (non-filter); a plate sensitive to the yellows and greens without using a ray filter and speedy enough for snapshots in bright light. We strongly advise our readers to try these plates if they are not already using them.

The Ensign Film (also imported by G. Gennert), will also give you excellent results for fall photography; and, when used in connection with the Imperial Exposure Meter, there is no reason why you should ever make an incorrect exposure. The price is fifty cents, and this is easily saved on the first dozen good negatives you secure from its use. Ask G. Gennert, 24-26 East Thirteenth Street, New York, and 16-20 State Street, Chicago, for literature.

PHOTOGRAPHIC LENSES.

So intense has been the demand for the new double Anastigmat "Eurynar," manufactured by the large optical works of Rodenstock, at Munchen, Germany, that it has been impossible for the European and American agent to secure these objectives from the works in sufficient numbers, especially in the more popular sizes and series. The "Eurynar" has undoubtedly exceeded all expectations as a successful introductory product of the Rodenstock Works in America. The new catalogue, that will be off the press November first, contains handsome and interesting portrait and high-speed illustrations, reproductions from original photographs taken with the "Eurynar" by American photographers. It also contains numerous testimonials from prominent professional and amateur photographers throughout the country. It may be well to add that the American agents, James Frank & Son of Augusta, Georgia, are entitled to much credit for introducing, in this country, photographic objectives of high quality at foreign prices.

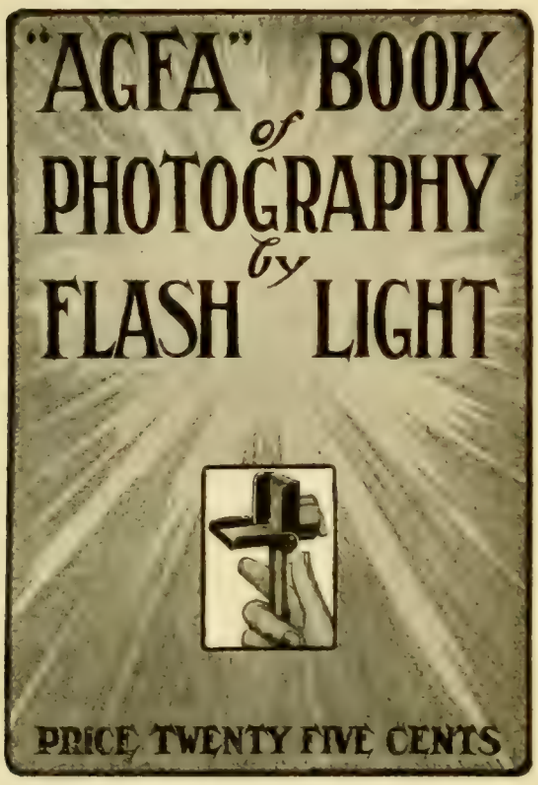
A HANDSOME CATALOG FROM AUSTRALIA.

"Photographic Plates and Papers" is the title of a handsome catalog just received from J. W. Small & Company, The Camera Supply Stores, Melbourne and Sydney, Australia. In addition to being very complete and full, listing, apparently, about all the material a photographer could well wish in the way of plates and paper, the pages have a most prismatic effect due to the reproduction in colors of practically all of the labels used on the goods. The idea is one that, while no doubt adding somewhat to the cost, could

be well followed by other agents and manufacturers. Any worker, unconsciously perhaps, would feel that a product bearing a label that had been made familiar to him through advertising, would be more likely to prove satisfactory than another line entirely or less clearly recalled as to the appearance of its label. The list is certainly a credit to our Australian correspondents.

A NEW "AGFA" BOOK.

The Berlin Aniline Works desires to notify those of our readers who are amateurs that they have in preparation a new book that completely covers the field of flashlight work. The method of distribu-



tion, for this new book, has been decided upon as follows: Amateurs desiring a copy of the book are to send a label from a package of "Agfa" Blitxlicht powder, together with ten cents, when a copy will be sent them promptly The book should be ready for distribution before this reaches the eyes of our readers, and requests, as above, will be filled in the order in which they are received.

AN ALBUM THAT IS RIGHT.

Just recently we wanted an album that would hold one hundred 6x8 prints that we had spent considerable pains and time in making. We wanted the album to be a little more serviceable, even if a little less ornate, than those we found on the market. We happened to think of the Photographic Times Albums, one of which had pleased our fancy some two years ago, and so ordered one. These albums are made in the bindery of a large printing establishment, of which a well known photographic writer is president, and they are made under that gentleman's personal supervision. Being made by the binders when they are not otherwise engaged, they permit of the best value in workmanship being applied; and, while the prices are not the lowest, the value is certainly incorporated in these albums. We would advise anyone wanting neat, well made, serviceable, and attractive albums to write for prices, and then send for what they want if not obtainable of their dealer. The address is, Photographic Times Publishing Association, 135 West Fourteenth Street, New York.

"ADVERTISERS' HANDBOOK."

The above is the title of a meaty little book that will be found of the greatest value to all who have to do with advertising, either in the making up or placing of it in magazines and other periodicals. Forty pages are devoted to types, borders and other material, and matter concerning harmony of composition. Twenty-five pages on space, type size and layout; a like number on the making of cuts and the proper paper for them; many pages of specimen type faces, all followed by a glossary of type, paper and copy terms. A copy of the book will be given, while they last, as a premium with a year's subscription to "Advertising and Selling," 71 West Twenty-third Street, New York.

REMOVAL TO NEW QUARTERS.

H. B. Hosmer, and who does not know Harry Hosmer, advises his many friends and customers that he has removed from his old store on Montgomery Street to a new store, 48 Geary Street, in the Ellery Arms Company Building. The location is much more central and added space permits of an increased stock. These favorable conditions, coupled with the popularity which Mr. Hosmer enjoys, should mean an increased business; and, if the well wishes of a host of friends avail, the new Geary Street supply house will more than fulfill its proprietor's most sanguine expectations.